The Orchadian

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Official Journal of the Australasian Native Orchid Society

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Dendrobium Andrew's Summit 'Madison' HCC/ANOS NSW.
Grower John Zietsch

The Orchadian

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Annual General Meeting of the Australasian Native Orchid Society Inc.

The 46th Annual General Meeting of ANOS Inc. will be held at the Gosford RSL Club at 10.00am on Saturday 1st August, 2009.

Any Group or individual member who has matters to be included on the agenda, along with any nominations for positions on Council, should have these with the Secretary no latter than one week prior to the AGM.

Send these items to:
The Secretary,
ANOS Inc.
PO Box 318, Willoughby, 2068

Standing L-R, Alan Hope, Malcolm Thomas, Eric Wilde, Barbara Duncan, Nette Megetto, Paul Slade, Graham Slater. Front row L-R Lois Dixon-Ward, Gerald, Helen Richards.

That Grand Old Gentleman of Orchids in Australia turns 100
Happy Birthday Gerald McCraith

Gerald McCraith AM turned 100 on 24th February and on Sunday, 1st March he celebrated with a party at the members' dining room at Flemington Racecourse, Melbourne, to which he invited 120 guests. There were five generations of his family present, many rabbit-os, his bowling friends, his professional friends, his neighbours and of course his orchid friends. People came from all around Australia to be part of that special celebration. Gerald had received a congratulatory letter from the Queen and the Governor General and on display also were letters from the Prime Minister, Premier, and the Governor of Victoria. The one educational certificate which Gerald received from his schooling, his Merit Certificate dated 1922, was also on display.

His granddaughter Belinda (Bin) spoke of Gerald's life, recounting the details of the changes in his life every 10 years and linking his activities with the changes and events on the world scene at the time, a fascinating story and reminder of the changes in the world since Gerald was born 100 years ago.

Eric Wilde spoke of Gerald's involvement in and contribution to the world of orchids spanning more than 60 years.

It was lovely to hear Gerald recite the poem 'If' by Rudyard Kipling, which he had learnt when a boy at school and has remembered all his life. While in the army during the second World War, Gerald carried his Rudyard Kipling book in his pack with him wherever he went.

Orchids in Australia have gained so much from the activities of Gerald. Apart from being a Life Member of many orchid societies, he was the first Vice-President of the Australian Orchid Council and its second President. He co-ordinated the arrangements for the Sixth World Orchid Conference held in Sydney in 1969. He has been an ambassador for the Australian orchid fraternity throughout the world.

Standing : AOF Research Committee Members, Colin Bower, Mark Clements and Ben Wallace with Gerald and Helen Richards.

His most important contribution to orchids in Australia has been the formation of the Australian Orchid Foundation, with the late Hermon Slade, in 1976. Quoting from the Memorandum of Association of the AOF, "Principal Objects: 1. To collect preserve protect promote propagate nurture and cultivate orchids of all kinds and in particular orchids native to Australia and its Territories and more particularly rare orchids in danger of extinction." Other objects of the Foundation include financing research into and the study of orchids, and educating the public and young people in particular.

The Foundation has funded hundreds of projects over the last 30 years, spending hundreds of thousands of dollars. This money has come from the interest received from donations and legacies to the Foundation – the original donations remain intact.

And Gerald's request for his birthday – no presents, but a donation to the Australian Orchid Foundation's Trust Fund would be greatly appreciated- Gerald's priorities never change!

So on that note, your (tax deductible) donations to the Australian Orchid Trust Fund would be greatly appreciated by Gerald, the Directors of the Foundation and orchids in Australia. Address – P.O.Box 322, Essendon North Vic 3041.

See the AOF website for more information.
www.australianorchidfoundation.org.au
Helen Richards, AOF Director.

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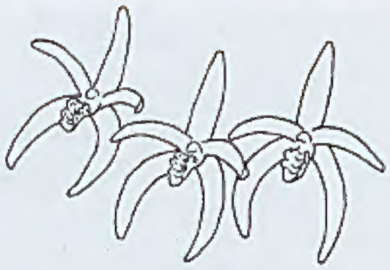

Proceeding into its eighth year this show gets better and better. A must in your list of orchid activities for this year. All welcome to exhibit and judging will be by an all ANOS panel. Monetary prizes and trophies will be awarded in a range of classes including other epiphyte and terrestrial categories

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OR contact Ted Walmsley on (02) 6562-7150 or Lloyd Edwards on (02) 6556-9766.

Bunochilus sp. in pod, so the pollinator must also be present.

Thelychiton falcorostrus firmly growing in the ground, is it now a terrestrail?

Good company and a well deserved lunch break.

Editorial.

In this issue Helen Richards reports on the celebrations for the 100th birthday party of Gerald McCraith. Many friends and relatives joined Gerald for his centenary celebration, including the directors and research scientists of the Australian Orchid Foundation. On behalf of all the members of the Australasian Native Orchid Society I wish Gerald all the best for this milestone and wish him all the best for the future.

Alan Stephenson keeps up up to date on orchid conservation and his dreams?? Bill Dobson shows how to be brutal with *Dendrobium speciosum* for healthier plants. Paul Ormerod has some notes on *Appendicula* species from the Solomon Archipelago. David Jones describes some rare and endangered *Hymenochilus* species from southern Australia. Peter Adams reports on the shows held by ANOS Melbourne Suburbs Group over the last few years.

Subscriptions are now due and you would have received a renewal form with your last *The Orchadian* and if you subscription is not paid up you will have received another with this issue. If by the beginnig of July we have not received your payment then a last reminder will be posted by mid July. Then you will no longer receive the magazine. So please pay promptly as it saves us a lot of money on postage costs. We look forward to your renewals.

As you are all aware June is the time when many shows, open days and orchid fairs begin. Some of these are listed on page 162, but keep an eye on your local bulletin and our web page. Many will be listed by Groups. Two of my favourite weekends away are the Open Day and Show at Tinonee Orchids and the Speciosum Spectacular held in Kempsey. Both these weekends attract native (and exotic) orchid growers from Victoria to Queensland. Both these weekends hold day long bushwalks to areas only the local members know and to date I have not been disappointed with any of the places we have visited.

Last year at the Kempsey Show around 20 people visited a place called Kookaburra. It was a log drive to this area and the walk was through some of the nicest temperate rainforest I have seen. The walk led us to a beautiful waterfall, the area rich in orchids.

It is always interesting to find something unusual or different and this walk certainly had a couple strange finds. Around the waterfall area we all spread out looking for orchids and many were seen that were typical for this type of habitat. First Gaile Creeggan found a *Bunochilus* species (*Pterostylis* affin. *longifolia*), not know by the locals in this area and then I ventured close to the edge of the cliff to try and get a better photo of the waterfall and came across a flowering size piece of *Thelychiton falcorostrus* (*Dendrobium falcorostrum*) on the ground. A tree had obviously fallen with the plant growing on it, but the orchid appeared to have continued growing while the tree had rotted away. I thought I had a nice orchid but when I went to pick it up it was firmly growing in the ground so I left it there, being so close to the edge it didn’t appeal to me to try and retrieve it. So I took a photo as evidence and joined the group, without a better photo of the waterfall, I had forgotten all about it when I saw the orchid?

Returning back to the cars we had lunch and exchanged stories of what we had seen and then headed back to the orchid show.

So needless to say I am lookiing forward again to these shows and catching up with everyone from Victoria, Queensland and every where else...yes even New Zealand. These shows are always worth the effort so as ‘Norm’ use to say “be in it”. NB The dinner at Kempsey Bowling Club is where you will have the best steak.

So I hope to see you there, Peter.

Environmental Update, EPBC Act Review

AS all interested orchid environmentalists will be aware, the first 10 year review of the Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act) is well underway as the first stage comprising submissions to the review closed on December 19th 2008. The second stage is now in progress headed by Dr. Allan Hawke with support from an independent panel of experts and a secretariat from the Department of Environment, Water, Heritage and the Arts (DEWHA). Face to face meetings with those who presented submissions were held in Sydney on March 30th and 31st and this gave the person or group the opportunity to present their case for changes to the act. I consider this to be most important as I have written many submissions to various government and private development proposals and never before have had the opportunity to meet the developer or a government representative face to face and despite the three hour train trip each way for a 30 minute meeting it was something in which I was very eager to participate.

The panel had of course read my submission along with all others and it was on the table in front of Dr. Hawke during the meeting. My submission was written in response to the questionnaire on the website which included all points of the EPBC Act the panel considered might be worthy of consideration and I can only imagine these points had been the result of 10 years of experiences regarding all areas of the existing act. In my submission I wrote of my experiences and gave personal and verifiable examples of what I consider to be shortcomings of the act and also of some who are responsible for environmental surveys undertaken as part of EPBC requirements. Some of these concerns are in the following paragraphs.

My major and continuing concern is with the non-identification of orchids noted during surveys. My concerns also include the non-recording of species at the conclusion of surveys. I realise that raising this will cause hackles to rise within some quarters but I know it happens and to be blunt, it should not happen. This includes common, rare and listed species and the more cynical of us would be given to feel that not all of the omissions and non-identifications are accidental. This is more common in some areas than others and I ask those who regularly read Environmental Impact Assessments and similar documents to note who does more work for certain individuals or organisations. I have always been of the opinion that local orchid knowledge is frequently greater than most imported professionals and that is why these reports should be scrutinised for possible omissions. To make a point I remember a now despatched government which regularly sought legal opinions where those answers could be relied upon to suit the flavour of the government of the day.

The species I have encountered which have caused problems are as simple as *Thelychiton speciosus* (syn. *Dendrobium speciosum*), *Cestichis reflexa* (syn. *Liparis reflexa*), *Calanthe australasica* (syn. *Calanthe triplicata*) or more complex species such as *Arachnorchis tessellata* (syn. *Caladenia tessellata*), *Cryptostylis hunteriana*, *Prasophyllum affine*, *Genoplesium baueri* or *Calochilus pulchellus*. My experiences with the inability of paid professionals to either miss-identify or fail to see or record any of the above species go back as far as 1995 and was the catalyst which prompted me to become involved in conservation generally and later to be up to my armpits and beyond with orchid conservation.

The other points made during the meeting will not be made public at this point as they will probably be counter-productive to the review at this stage of the process and I have only mentioned the above matters as I have experienced them during my tenure in this voluntary position. Points made (criticisms) either directly or by inference, have been highlighted as they have affected issues I have been dealing with at the time.

Bulahdelah

This is another issue which has been bubbling away for several years following the plans to construct a road by-pass of the town through the type site and largest known populations of *Rhizanthella slateri*, *Cryptostylis hunteriana* and *Corybas dowlingii*. All are listed species and all were in grave danger as they were in the line of the proposed by-pass. Since the early design process began the NSW Roads and Traffic Authority (RTA) have never retreated from their planned route and were intractable in their opposition to any other ideas. However, despite my predictions of certain annihilation of the majority of the three species concerned, as of Wednesday April 1st I am more assured than at any other time that the orchids will escape with minimal impact. This, I would like to think was achieved in no small way by the five submissions I have written in regard to this project (and those of others) over several years and the obvious mood of opposition from the residents of Bulahdelah, which has been against the RTA route proposed. However, these and other factors have combined to produce a result which should please almost everybody.

It should be well known to all those following this episode that Dr. Mark Clements was presented with the opportunity to undertake research work for the RTA on all aspects concerned with the three relevant species. He is well known for his work with *R. slateri* and the opportunity to lead the investigation to discover the unknown aspects of this species and also *C. hunteriana* and *C. dowlingii* was an opportunity too good to resist. I will not divulge any details of his work but I can say much has been learned about all species and more is expected from both field work and laboratory studies. Following a talk in Canberra by an associate working with Dr. Clements, (Dr. Chris Howard) it is obvious the previous apparent intractable attitude of the RTA has softened and in my opinion this is due in part to submissions received and community feeling but I believe the input of Dr. Clements, Dr. Howard and their discoveries so far have played a large part in the change in attitude of the RTA. From the talk, it was obvious to me the scientific importance of these rare and endangered species is now well ingrained in RTA thinking and hopefully this will stay with the department for future projects. I know the RTA have made small but significant changes to the by-pass proposal to accommodate these orchids and I am pleased we have the right people working to protect them and enlighten us with the intricate details of habitat, pollination, fungal requirements and seed distribution, on which orchid enthusiasts have been guessing and speculating for decades.

Alan

Was I Dreaming?

PLEASE don't wake me as I had a dream the Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act) was actually used as designed, with no apparent loop holes or escape clauses. This is such an alien event I was sure I was dreaming but when I checked the minister's website, the press release was there. There are some who might have trouble coming to grips with the decision by the Federal Environment Minister, who in this instance, did his job and kept to his word in the conversations with me and a few others, prior to his decision to refuse a Shoalhaven City Council (SCC) submission to rezone a section of land from rural to residential.

The land known as the Heritage Estate near Vincentia in NSW was subdivided and sold prior to proper planning controls in 1915 and as such no development approval applied to any of the 1200 lots and more importantly no inference was given for purchasers to expect approval. Despite this, blocks were sold over the years for varying prices and as late as 1995 despite countless notices and warnings that building approval was not assured. In 1988 a lobby group was formed and over a period of 10 years exerted pressure on the SCC and eventually a Commission of Inquiry (CoI) was held in 1998. The findings recommended a maximum of 730 lots could be developed but the landowners must pay for all services including, roads, water, power, sewage, electricity bushfire asset protection, as none of these features were physically provided in the original subdivision. The land was a subdivision on paper only and the Heritage Estate and five other estates in the Shoalhaven are known as Paper Estates. All were subdivided by the same developer under numerous company names. In 1998 terms the provision of infrastructure was estimated to be between $35,000 and $52,000 per block, depending on the number of blocks developed. In the years following the CoI, the lobby group became more vocal and the skulduggery began. With almost all landowners residing in and around Sydney only one person per household was eligible to vote in council elections (absentee landlord act) and with certain people leading these owners to believe they would provide development approval, a means of getting them from Sydney to vote in the council elections was guaranteed but the trip came with one provision and I will leave the reader to fill in the gaps. This ensured a council majority ready and willing to tell the landowners what they wanted to hear.

In 2006 council voted $300,000 of ratepayer funds for a full environmental study, accompanied by a social and economic study, which said most landowners were poor European migrants without the awareness to realise they had been duped when purchasing land. I feel sure this is the first time public money has been used for private purposes such as this. The money was to be recouped via a levy on future rates from developing landowners. The study was done and it found many things I am sure the council would have preferred were not found. In short, the survey found four threatened species, five migratory species and an endangered ecological community; all of which are listed under the EPBC Act. In addition to these a further ten species are either listed under the NSW *Threatened Species Conservation Act 1995* (TSC Act) or are considered significant species. The major feature of the report was the recommendation that the area should not be developed. While pleased with this conclusion it did surprise me as the SCC usually get what they want but this time I feel they have shot themselves in the foot. Not only was the environmental study quite wide ranging and thorough but the final result determined the proposal would be a "controlled action" requiring the approval of the Minister for the Environment.

The two orchids concerned are *Cryptostylis hunteriana* (211 individuals) which are well spread in certain sections of the estate and *Genoplesium baueri* (approximately 40 individuals). The report indicated almost all of the *C. hunteriana* populations would be lost if development proceeded. The report listed several orchid species but missed many. My own knowledge of the area indicates at least 53 species could occur on this site and I have found many of these in the immediate area. As well as *G. baueri* my recent visits to the site located three individuals of an Alba form of *G. baueri* and also plants of *Spiranthes australis*, not located during any of the surveys I must also add the brown snake I encountered, which also was not on the species list. I might add this site is one kilometre from the Stockland site, which is marked for a Regional Shopping Centre and a further kilometre from the now developed residential section. This site is home to a population of 300 plants of *Prasophyllum affine* and numerous scattered individuals of *C. hunteriana* and several of the recently named and endangered *Calochilus pulchellus*. If that is not enough, the find of *Rhizanthella slateri* is also just up the road. This area surrounding Jervis Bay has been recognised for decades as a biodiversity hot spot and reports such as this continue to reinforce that belief. This situation is typical of many as the proponents of development are always stunned when they read the final list of species which are *in situ* and a further list of strong possibilities as most of us realise, it is only when an exhaustive study is conducted on any given section of undeveloped bush land that its true environmental value is recognised.

I was contacted by the office of the Environment Minister as were others who had forwarded submissions against the project and we had an on-site meeting to further put our points. The minister had previously met with the proponents and wanted to hear the other side of the argument. This was done during 20 minutes of light rain and he made the statement "my decision will be made on matters of national environmental significance and advice from my department." This highlights the importance of preparing a submission to any project deemed to be environmentally sensitive, as those who made a submission were the only people who were contacted for any of the meetings.

Following the release of the environmental study the process required independent assessment which was provided by scientists from Canberra and Queensland. Both assessments concurred with the study findings and both were extremely firm in their conclusions that this estate should never be developed for residential purposes. The decision of the Environment Minister was made on Friday 13th March and it proved to be a black Friday for those who have pushed this development at all costs. On Monday 16th March, I and others met with the SCC Mayor, numerous councillors, SCC engineers and the NPWS Regional Manager at the Bomaderry Creek Regional Park almost in the centre of Nowra. This park was proclaimed six years ago and prior to its dedication the SCC had planned to push a road through the area. Despite losing the case in the NSW Land and Environment Court $1.5M has been spent by the SCC to reverse that decision. From discussions with several councillors it became clear some were hesitant to proceed with detailed planning and more environmental surveys as they said "we must be cognisant of the Heritage Estate decision as we don't want to spend large sums of money to have our plans rejected by Peter Garrett." There are other less destructive options for this road and one would hope one of these would be seriously considered. The only orchids concerned are nine individuals of *G. baueri* but several other listed species of flora and fauna are threatened and two of these are endemic.

In regard to habitat destruction being the most critical element in the disappearance of our orchids, habitat fragmentation is equally as bad. A feature of many conversations is the idea that 'we only want half the area or even a quarter" but that equation is a recipe for disaster, as it is this generation which wants half but the next generation will also want half followed by half for the third generation and each generation, eventually leaving nothing. If one considers habitat loss in this manner I would expect/demand greater militancy from this generation to prevent any loss.

The lessons learned from these episodes are that some groups will stop at nothing to get their way and those concerned with environmental issues must be vigilant. This includes reading lengthy reports, usually as PDF documents on a council or government website and making a knowledgeable response, as my experience tells me most local orchid enthusiasts know more about their local species than an imported so-called expert and it is essential for these locals to make a submission to these projects as experience also tells me, they can have some impact if you keep up to date with developments within your local community. Now it must be time to wake up!

Alan W Stephenson
Conservation Officer
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www.australianorchidfoundation.org.au

Splitting up a *Dendrobium speciosum*.

Bill Dobson
bdobson@optusnet.com.au

There comes a time when a *Dendrobium speciosum* needs to be split up. This is distinct from "potting-up" which only involves knocking the plant out of its current pot and placing it into a container that will give it 2 to 3 years more growth.

Why do we split up? The reasons are many and varied and include the following:

- Plant too big to lift
- Centre of the plant is dead
- Give away or sell a piece of the plant
- Plant is not "looking well" and others.

If first we look at potting on…this is something that we have done since we bought it as a seedling in a 50 mm tube or moved on from a flask. Now, I will make an assumption that it has been potted on every year from then to about 5 years so at this time it should be in a pot about 150 - 170 mm in size. From here it is potted on every 2 to 3 years depending on the plant and speed of growth. So by the time it reaches a size of 250 mm or 300 mm it could be 9 to 12 years old. This of course means that in the centre of the pot the bark is also 9 to 12 years old.

The decission has been made to divide this plant, it is badly pot bound.

Now *Dendrobium speciosum* has a great habit with its roots - they will send out a mass of them each year, usually coinciding with each new pseudobulb that is grown. These head out towards the edge of the pot and then run around and around, keeping out of the light and looking to anchor the plant and find moisture and nutrients. If the roots are damaged it can send out more until it has anchored itself - this is the prime job of the roots. It can also obtain nutrients via its leaves by foliar feeding (as an aside we have been doing this with ALL our plants for the past three years and have had great results). OK, we have made the decision to split the plant up.

Knock it out of the pot and cut all the roots off….

YES, CUT ALL THE ROOTS OFF!

See the pictures....I know that your hand is shaking at this point and you are saying **NO WAY!!.** Well just trust me, I have done this hundreds of times now and the roots will come back with such vigor it will amaze you. It may be as soon as 6 weeks or up to 3 months, but I can guarantee that they will be out the bottom of the pot in a year's time AND usually, as the plant has had a shock, it more often than not will flower in the following season.

Next... and we still have not split the plant, it is now easier to see where the plant can be split, and here you should have at least 3 to 4 (or more) mature pseudobulbs. This is the minimum you should break up into unless you want to wait 2 to 3 years before flowering. Pot the divisions into your favorite mix, staking it if necessary as it's important that they don't move while waiting for the roots to emerge.

Do NOT throw away any pseudobulbs with a live "eye" as these will also grow but may take a while longer. Put it on the bench, pot it up or hang it up until the roots come and then pot it up.

Dendrobium speciosum is the true survivor as it has to contend with the Australian bush including flood, drought, fire and everything trying to eat it.

They really are the King of Orchids.

-oOo-

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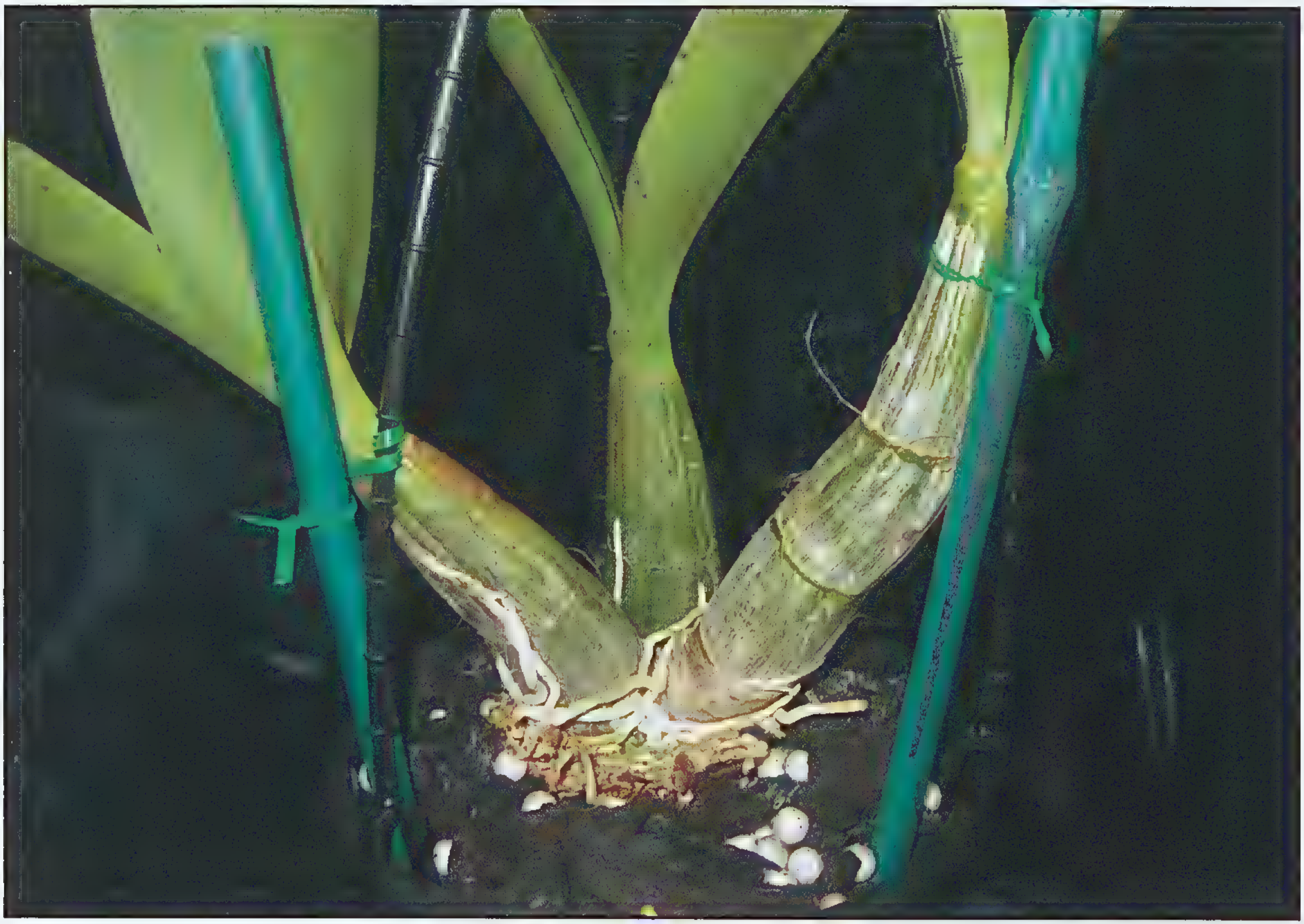
Removing all the roots from the division is very important!!! All the roots.!!!



Staking the division is necessary to prevent the plant from moving in the wind or when watering.

Show Dates for 2009.

Revesby Workers Australian Native Orchid Club

Spring Show

Wednesday 9th September 2009

Time of Judging: 9.30 am

[subject to confirmation]
Address of show: Revesby Workers Club,
2b Brett St Revesby 2212
Open to the public: it is expected the show will be open at before 11.00 am and open until approximately 7.00 pm [subject to conformation].

Sarcanthinae Show

Saturday 24th October 2009
At Panania Senior Citizens Centre Cnr. Peffer St and Anderson Ave, Panania NSW.[southern side of the railway line]
Open 10.00 am. To 4.00 pm.
Plant sales: from 8.30 am.
Benching 6.30 – 8.30 on Friday 23/10/09.

Contact Persons for Shows
Peter Dowling 02 9793 2764 email petersdow@hotmail.com or
President Don Roberts 02 9771 5474.

ANOS Geelong Group Annual Spring Show

Saturday 7th and Sunday 8th November 2009

10am to 4pm each day
The Masonic Centre

Regent St., Belmont Geelong
Melway page 451 H10

Blue Mountains & Penrith District OS

4th & 5th July
at the Guide Hall in Nepean St.,
Emu Plains NSW
cnr Nepean and Great West H'way
opposite the Melrose Hall

ANOS Warringah Group Spring Show 2008

12th -13th September
Forestville Community Hall
Starkey St Forestville

ANOS Sydney Group

Spring Show and Plant Sale
19th - 20th September 2008

Eastwood Shopping Centre

Sarcanthinae Show and Plant Sale
18th October 9am -4pm
Castle Glen Community Centre
Ridgecrop Drive, Castle Hill

Some other dates for your calender:

Native Orchid Auction
6th June - Lake Macquarie Performing Arts Centre, Lake st. Warners Bay.

Mingara Orchid Fair
27th -28th - June, Mingara Recreational Club.

Tinonee Orchids Open Day and Show.
12th July - Tinonee Orchid Nursery, Tinonee.

Hills District Orchids Winter Open Day
July 26th - 183 Windsor Road Northmead 2152.

St Ives Orchid Fair
14th -16th August, St Ives Show Ground.

Speciosum Spectacular , Kempsey
5th -6th September, 57 Spooners Ave, Greenhills via Kempsey.

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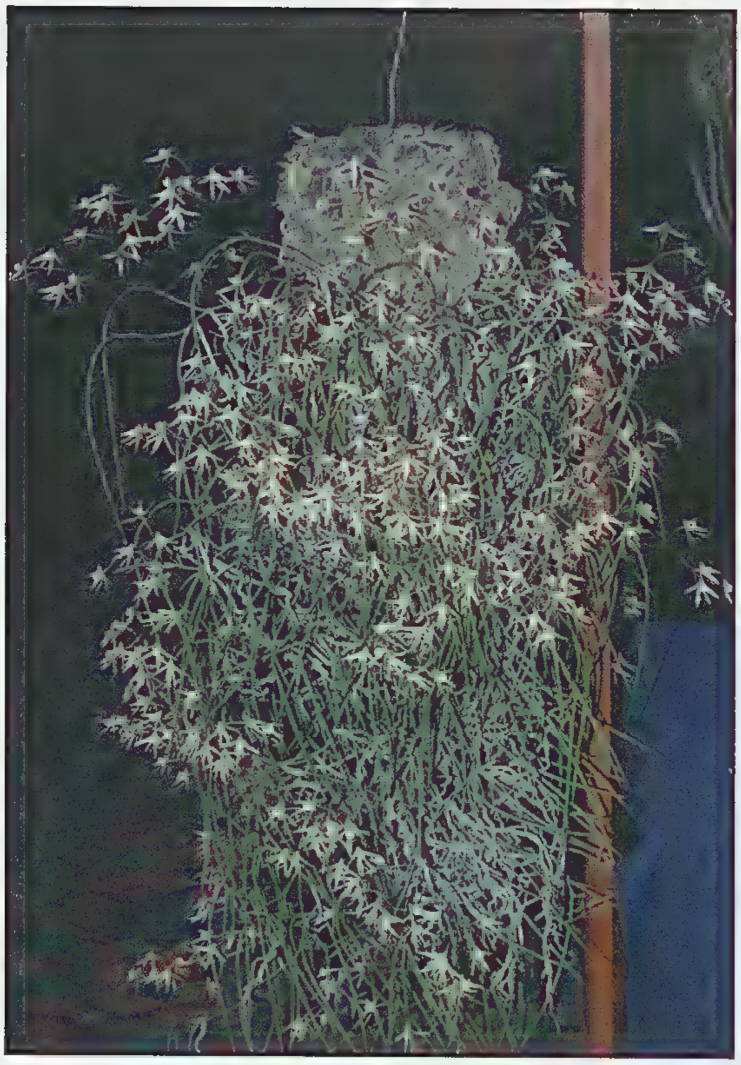
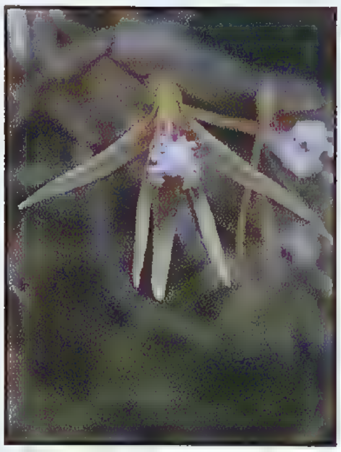


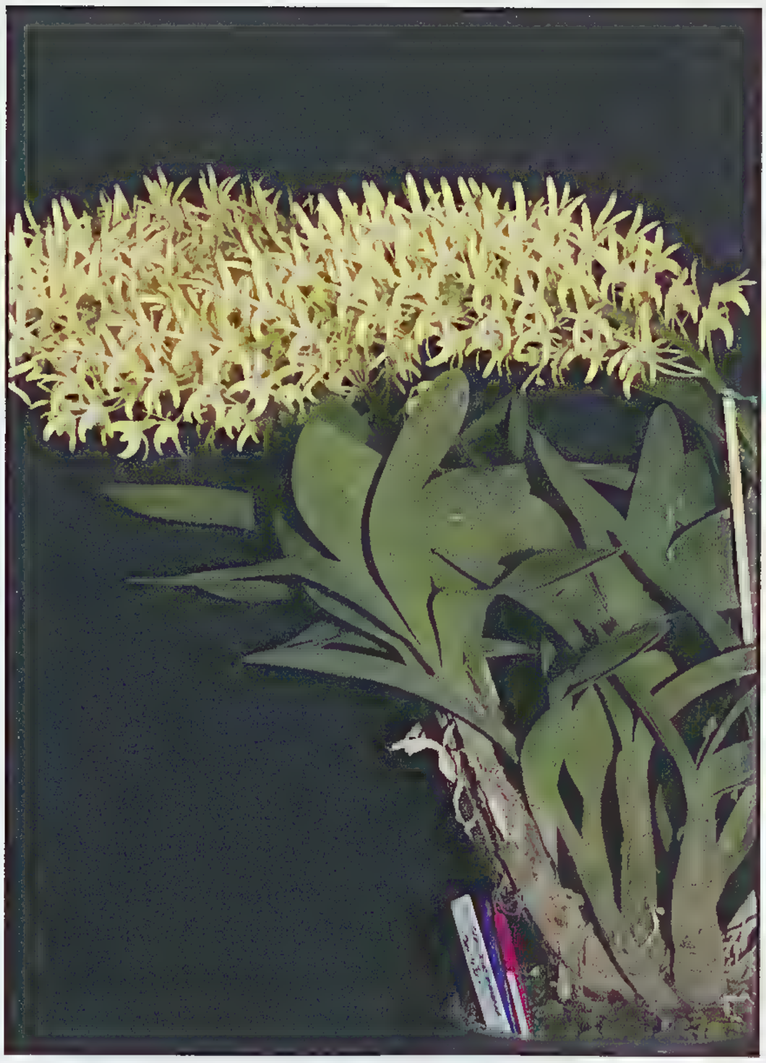
ANOS Award 141 ACC 78.0%

Dockrillia Rosemary Jupp 'Tilly'
Owner: Andy Paterson
Judged by: New South Wales Panel
Date: 12/10/2007

Results		**Average Panel Points**
Shape	25	
Colour	20	
Size	15	
Substance & Texture	10	
Floriferous	15	Judged by
Habit of Infloresence	15	Appreciation
Total:	**100**	**78%**

Measurements (mm)	
Across Flower	35.33
Vertical Flower	26.80
Petal L	19.47
Petal W	4.11
Sepal L	17.96
Sepal W	4.77
Dorsal L	19.54
Dorsal W	4.77
Labellum L	11.04
Labellum W	7.75
No. of Flowers	685
No. of Buds	0
No. Inflorescence	137



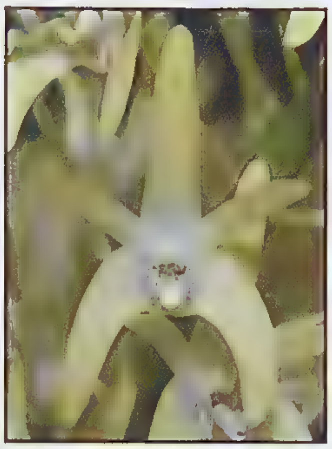


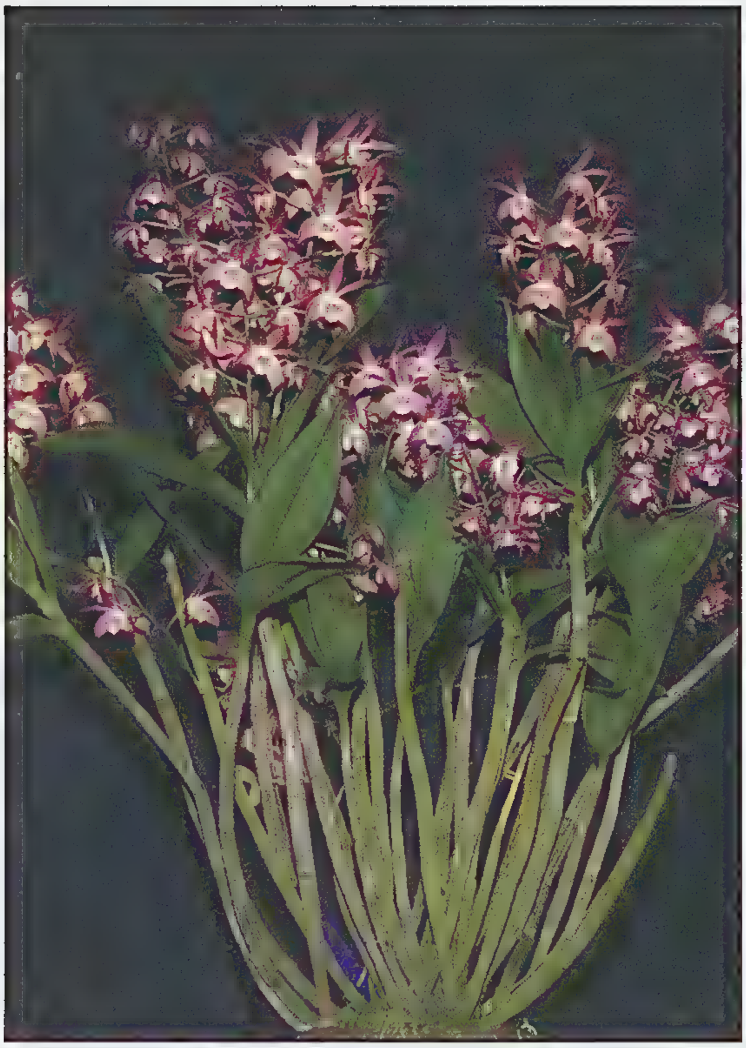
ANOS Award 142 HCC 78.38%

Dendrobium speciosum 'Timothy'
Owner: Ted and Winsome Wamsley
Judged by: New South Wales Panel
Date: 6/09/2008

Results		**Average Panel Points**
Shape	25	19.61
Colour	20	16.22
Size	15	11.16
Substance & Texture	10	7.75
Floriferous	15	11.25
Habit of Infloresence	15	11.55
Total:	**100**	**78.38%**

Measurements (mm)	
Across Flower	51.37
Vertical Flower	63.10
Petal L	37.50
Petal W	13.57
Sepal L	34.55
Sepal W	16.89
Dorsal L	39.78
Dorsal W	17.78
Labellum L	21.80
Labellum W	17.00
No. of Flowers	138
No. of Buds	0
No. Inflorescence	3



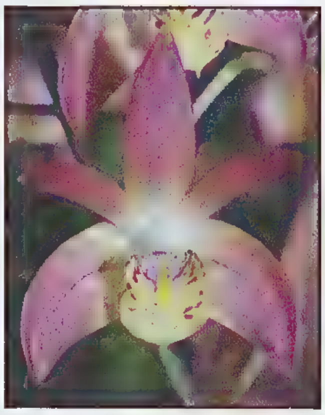


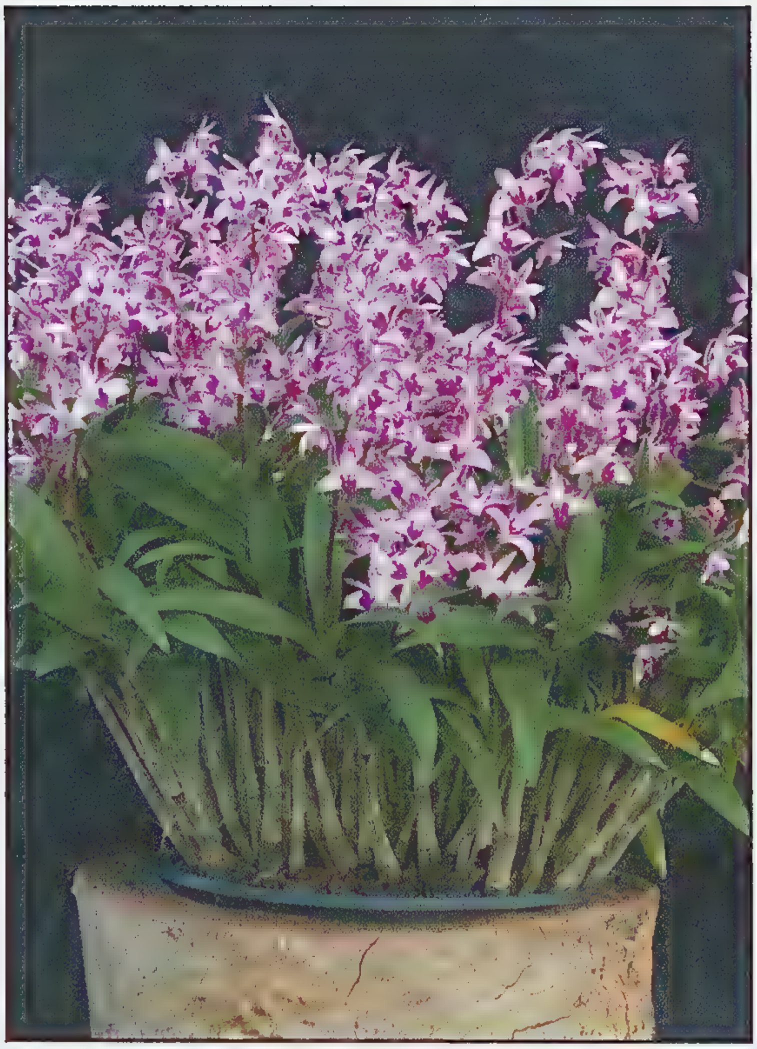
ANOS Award 143 HCC 78.59%

Dendrobium Andrew's Summit 'Madison'
Owner: John Zietsch
Judged by: New South Wales Panel
Date: 6/03/2008

Results		**Average Panel Points**
Shape	25	19.68
Colour	20	16.15
Size	15	11.53
Substance & Texture	10	8.15
Floriferous	15	11.81
Habit of Infloresence	15	11.25
Total:	**100**	**78.59%**

Measurements (mm)	
Across Flower	40.00
Vertical Flower	45.00
Petal L	33.00
Petal W	15.00
Sepal L	33.00
Sepal W	23.00
Dorsal L	34.00
Dorsal W	19.00
Labellum L	23.00
Labellum W	22.00
No. of Flowers	442
No. of Buds	34
No. Inflorescence	26



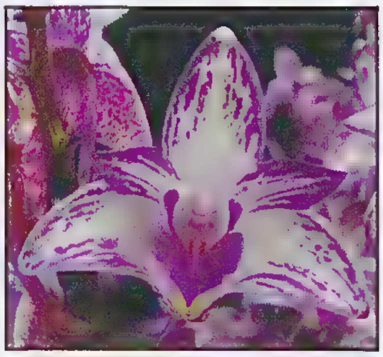


ANOS Award 144 HCC 77.70%

Dendrobium Victoria Flair 'Solid Violet Lip'
Owner: Henk van den Berg
Judged by: New South Wales Panel
Date: 10/09/2008

Results		**Average Panel Points**
Shape	25	19.17
Colour	20	16.10
Size	15	10.50
Substance & Texture	10	7.60
Floriferous	15	12.39
Habit of Infloresence	15	11.67
Total:	**100**	**77.70%**

Measurements (mm)	
Across Flower	36.5
Vertical Flower	31.0
Petal L	18.0
Petal W	5.0
Sepal L	21.6
Sepal W	8.5
Dorsal L	21.3
Dorsal W	8.1
Labellum L	12.5
Labellum W	8.7
No. of Flowers	759
No. of Buds	0
No. Inflorescence	69



ANOS Melbourne Suburbs Group Shows

This active and enthusiastic group was founded in June 2005 and held its first spring show in early October 2006 at Montrose Public Hall in Melbourne's outer east. The historic hall was packed with individual and group displays Two thirds of the membership of 35 were actively involved in the show, most present throughout the two days. Since then our group has recruited a number of growers new to orchids, who regularly attend and participate in the meetings and activities.

ANOS (MS) Group First Spring Show 30th Sept. – 1st Oct. 2006. A peak of the season display of most styles of *Dendrobium* provided the major highlight, with a few early *Sarcochilus* species and hybrids creating some variation. The outstanding three plants of the show, as judged by the ANOS Judging Group in Training, were each later given awards by general orchid judging panels.

They were:

Champion Species:
Dendrobium speciosum 'Blackdown Gold'

Champion Hybrid:
Sarcochilus Sunspot

Champion *Dendrobium kingianum*:
D. kingianum 'Effie's Dragon'

ANOS (MS) Group Second Spring Show 29 – 30th September 2007. The show was held in conjunction with a Symposium and Showcase. Visiting interstate ANOS judges Michael Harrison and Wayne Harris led the local group in judging. NSW judge Stephen Kemp also participated. Highlights were:

Champion Species:
Dendrobium speciosum 'Charlie'

Champion Hybrid:
Dendrobium Cobber 'Plum Ice'

Best *Sarcochilus*:
Sarcochilus Melba

ANOS (MS) Group Symposium and Showcase 30th September 2007. The Symposium celebrated *D. speciosum* and other Australian orchid icons, against the backdrop of colourful poster presentations and a superb display of specimen plants, including several examples of each of the nine described varieties of *Dendrobium speciosum*, as well as terete-leaved dendrobiums, *Dendrobium kingianum* and *Dendrobium* hybrids. M. Harrison and W. Harris again led the local training judging panel. Several plants, including the Grand and Reserve Champion *Dendrobium speciosum* and the Champion *Dendrobium* Hybrid were outstanding and considered worthy of an AM. They were later awarded at that level by AOC judges. Champion Specimen was *Dendrobium* x *gracillimum* 'Len' which was subsequently awarded the prestigious national AOC Cultural Award of 2007. The Grand Champion, *D. speciosum* 'Windermere' X *D. speciosum* 'Misty Mountain' was a first flowering seedling with nine arching racemes presently the flowers directly to the viewer.

Special highlights of the Showcase display were the recently described taxa *D. speciosum* var. *carnarvonense and* var. *blackdownense* from Central Queensland, and *D. speciosum* var. *boreale* from north Queensland. This was a first experience for many of the visitors. A 48 page illustrated book from the Seminar, including photographs of all nine varieties of D. speciosum, and of the posters, was published in 2008 as ***Dendrobium speciosum* and other Australian Icons: A**

Symposium and Showcase. It is available from the ANOS (MS) Group by enquiries to PO Box 169, Bayswater 3153. (Note errata: P.46- read *D. speciosum* var. *grandiflorum* 'Lemon Ice', P. 30 -read *D.* Australian Freckles(also called *D.* Jiggi'), P. 41- read J. Sharam).

Major Showcase Results included:

Grand Champion:
D. speciosum 'Windermere' X *D. speciosum* 'Misty Mountain'

Reserve Champion:
D. speciosum var. *grandiflorum* 'Lemon Ice'

Champion *Dendrobium* Hybrid:
D. Yondi X *D.* Bardo Rose

Champion Specimen:
D. gracillimum 'Len'

Champion Other *Dendrobium* species:
D. striolatum

ANOS (MS) Group Third Spring Show Oct. 4-5th 2008. After a year of patient negotiation the group secured a new key and larger venue for our spring shows at Lillydale Lake Meeting Hall, and our show is now listed on the Calendar of Events of the Shire of Yarra Ranges. This is a picturesque venue surrounded by parkland near the Lake, with ample parking. The Mayor, Cr. Tim Heenan, was instrumental in obtaining the new venue, and after opening the show showed a genuine interest in the plants and the judging process. Large posters which depicted key areas of growing and information about Australian orchids provided a colourful backdrop, and a continuously running digital programme of local terrestrial orchids attracted much interest. Some highlights of the show results were:

Champion Species:
D. striolatum

Champion Hybrid:
D. delicatum 'Tunstead's White'

Champion *Sarcochilus*:
S. falcatus

Best Orchid by a Novice:
D. striolatum

ANOS (MS) Group Sarcochilus Show November 2nd 2008. At short notice following the success of the Spring Show this event was held at the Kuranga Native Plants Nursery in the bush environs of Mt. Evelyn . This show gave the Judging Panel good experience in the genus immediately prior to the judging of the ANOS(Geelong) Group Sarcochilus Show. Major results were:

Champion *Sarcanthinae* species
S. hartmannii

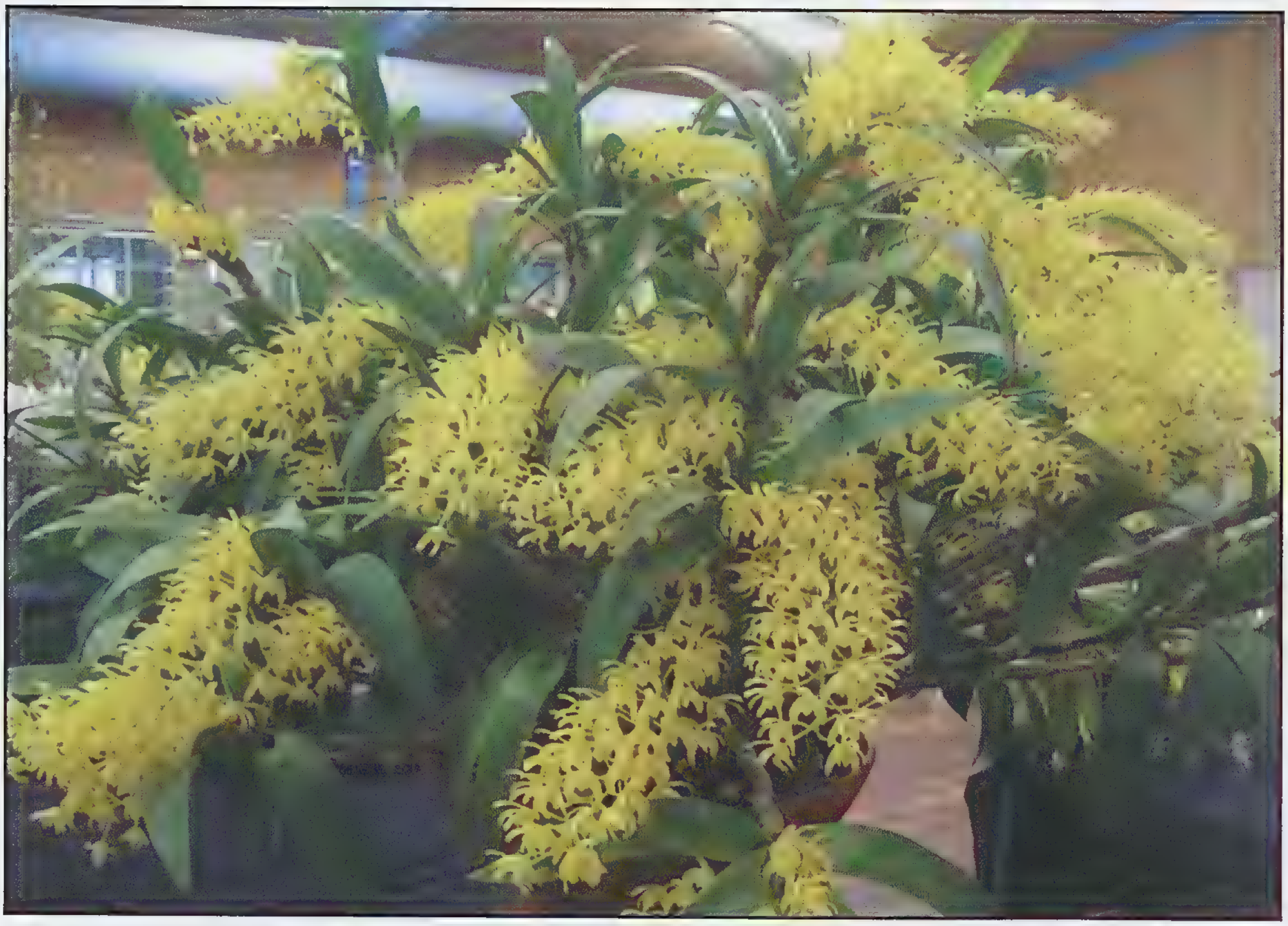
Champion *Sarcanthinae* hybrid
S. Melba

Champion *Sarcanthinae* specimen
S. hartmannii 'No. 2. '

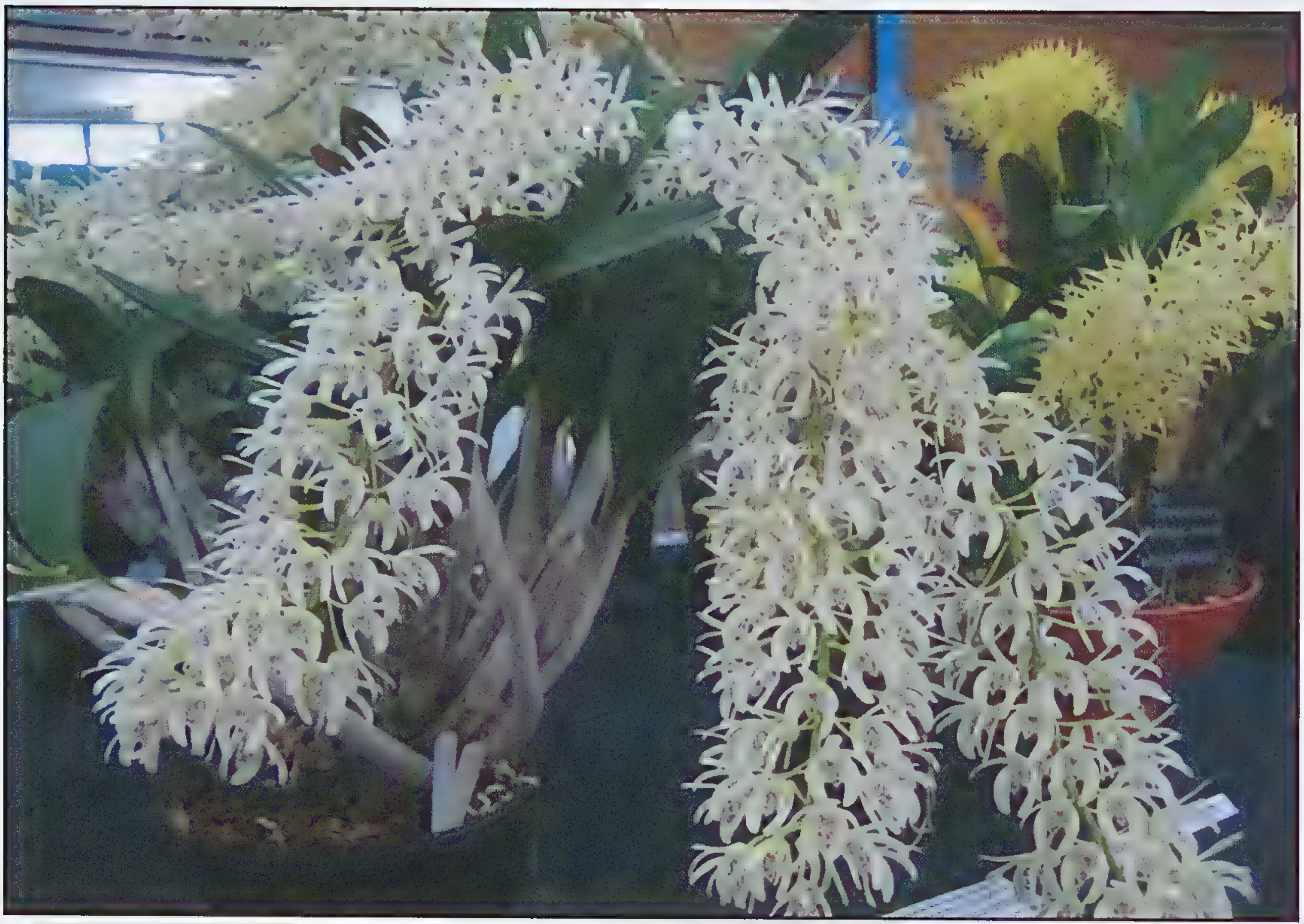
Champion *Sarcanthinae* by a novice grower
S. Melba x *S.* Heidi.

ANOS (MS) Group Fourth Spring Show October 3-4th 2009. Group members are now planning for a best ever show and at our regular monthly meetings senior members are providing ongoing detailed cultural and displaying advice to our newer growers and aspiring show exhibitors.

(more photos on pages 188 189 and 192) Ed.

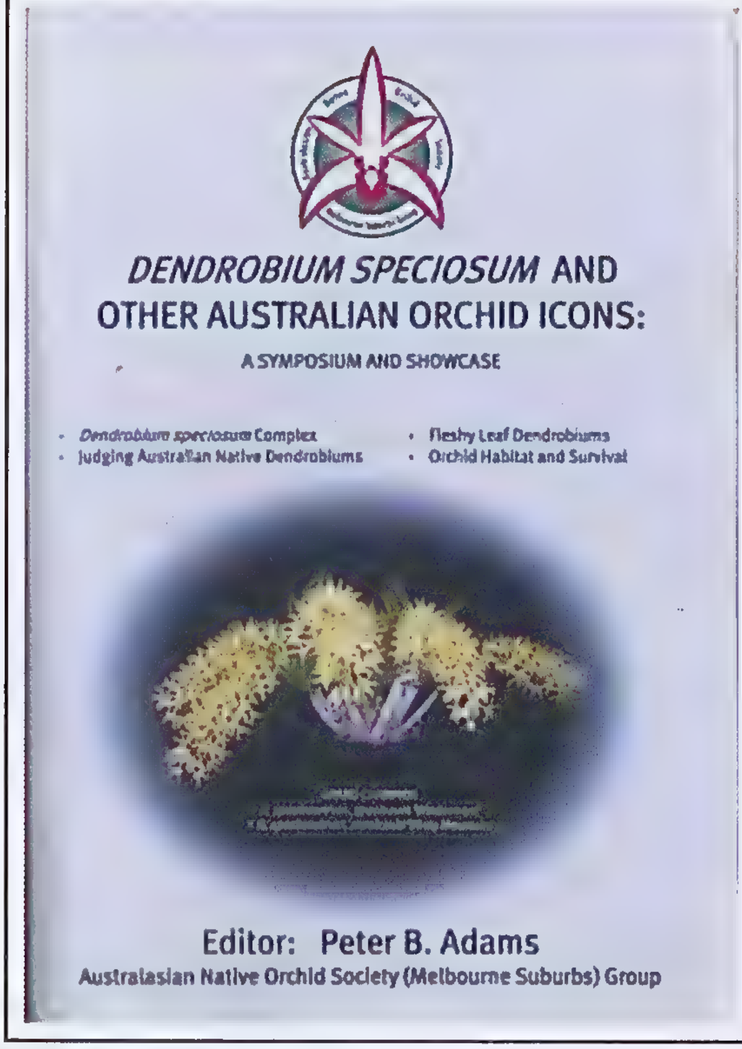


Dendrobium x *gracillimum*, Champion Specimen 2007 Show.



Dendrobium speciosum var. *boreale*.

Dendrobium speciosum 'Windermere' x *Dendrobium speciosum* 'Misty Mountain', Grand Champion 2007 Symposium and Showcase.



DENDROBIUM SPECIOSUM AND OTHER AUSTRALIAN ORCHID ICONS:

A SYMPOSIUM AND SHOWCASE

- *Dendrobium speciosum* Complex
- Judging Australian Native Dendrobiums
- Fleshy Leaf Dendrobiums
- Orchid Habitat and Survival

Editor: Peter B. Adams

Australasian Native Orchid Society (Melbourne Suburbs) Group

"a valuable range of topics about *D. speciosum* and related taxa, from their systematic and ecology to conservation and cultivation….information from detailed studies over the past 26 years. I congratulate ANOS (Melbourne Suburbs) Group, the contributors, and the editor, for presenting and publishing a most informative symposium and showcase"

Philip Moors, Director, Royal Botanic Gardens, Melbourne

***Dendrobium speciosum* and other Australian Icons: A Symposium and Showcase.**

It is available from the ANOS (MS) Group by enquiries to PO Box 169, Bayswater 3153.

Notes on four species of Solomon Archipelago *Appendicula*.

Paul Ormerod,
P.O. Box 8210,
Cairns 4870, Queensland.
Email: wsandave@bigpond.net.au

ABSTRACT: Notes are supplied on four of the eight species of *Appendicula* (including *Chilopogon*) known to occur on Bougainville and the Solomon Islands. *Appendicula neohibernica* is considered a new synonym of *A. flaccida*, and *A. polyphylla* is newly recorded from the Solomons. Two new species are proposed, namely *A. mimica* and *A. togarupia.*

Appendicula Blume is a mostly Malesian genus of about 130 caulescent, leafy, small flowered species. New Guinea is the richest area of speciation, currently with about 40 species. Lewis & Cribb (1991) recorded seven species of *Appendicula* from Bougainville and the Solomon Islands, as well as one species in the synonymous genus *Chilopogon* Schltr. None of the eight taxa recorded were endemic.

An examination of the available herbarium material of *Appendicula* from the Solomon Archipelago reveals that three previously recorded species (namely *A. bracteosa* Rchb.f., *A. lutea* Schltr. and *A. pendula* Blume) do not occur in the islands. Material referred to the three aforementioned taxa belongs to the two new taxa and the new record discussed below.

Thus there are eight species (two endemic) of *Appendicula* in the Solomon Archipelago, however the status of *A. vanikorensis* Ames (=*A. reflexa* Blume) requires further study and material referred to *A. oxysepala* (Schltr.) J.J.Sm. may represent a separate taxon.

Appendicula flaccida (Schltr.) Schltr., Rep. Sp. Nov. Regni Veg., Beih. 1:351, 1912.
Basionym: *Podochilus flaccidus* Schltr., in Schum. & Laut., Nachtr. 2:117, 1905.
TYPE: Papua New Guinea – Torricelli Range, 900 m, April 1902, *R. Schlechter 14342* (Holotype: B, destroyed; Isotype: K!).
Synonym: *Appendicula neohibernica* Schltr., Rep. Sp. Nov. Regni Veg., Beih. 1: 352, 1912. *syn. nov.*
TYPE: Papua New Guinea – New Ireland, near Punam, 600 m, July 1902, *R. Schlechter 14706* (Holotype: B, destroyed).

Distribution: Indonesia (Papua); Papua New Guinea; Solomon Islands.

Specimens examined: Papua New Guinea – Bougainville, Pavairi, 550 m, 26 January 1967, *P.S. Lavarack & C.E. Ridsdale NGF 31265* (K).
Solomon Islands – Choiseul, Sarelata Village site, 600 m, 29 October 1986, *R. & C. Mitchell 38* (K). Guadalcanal, *sine loc., S. Wickison 106* (K); Hidden Valley, tributary, 275 m, 9 July 1965, *P.F. Hunt RSS 2131* (K). Santa Isabel, Maruto, 300 m, 28 December 1932, *L.J. Brass 3388* (BRI).

Notes: Lewis & Cribb (1991) used the name *A. neohibernica* for plants of this species from the Solomons. Study of specimens from New Guinea and the Solomons convinces me that *A. neohibernica* should be treated as a synonym of *A. flaccida.* The record for Bougainville is new. The collection *Hunt RSS 2131* was wrongly listed as *A. pendula* Blume by Lewis & Cribb (1991).

The name *A. flaccida* was first used by J.J. Smith (1911:563) in notes under *Dendrobium insigne* (Blume) Miq. but unfortunately without direct or indirect reference to a basionym. Thus I have accepted Schlechter as the first author to validly make the combination.

Appendicula mimica Ormerod, *sp. nov.*
TYPE: Solomon Islands – Guadalcanal, E

slopes of Mt. Gallego, 915 m, 7 July 1965, *P.F. Hunt RSS 2031* (Holotype: K!; Isotypes: BSIP!, K!).

Synonyms: *Appendicula pendula* auct. non Blume: Lewis & Cribb, Orch. Solomon Isl. & Boug.:132, Pl.4D, 1991 *p.p.maj.*

Appendicula polystachya auct. non (Schltr.) Schltr.: Lewis & Cribb, Orch. Solomon Isl. & Boug.:133, 1991 *p.p.*

Affinis A. togarupia Ormerod *sed sepalis dorsalis obtuso ad subacutis (non minute truncatis) et callus labello humilis cum carinae recta (non incurvatis) differt.*

Epiphytic, occasionally terrestrial herb. Rhizome short. Roots terete, to 1.5 mm thick. Stems caespitose, erect, leafy throughout but as stems age the lower leaves dehisce, usually simple, occasionally branching, 23-70 cm long, 0.10-0.45 cm thick. Leaves oblong-lanceolate to lanceolate, apex acutely inequally bilobed, midvein ending in a slender mucro, thin, midgreen, 1.2-6.0 cm long, 0.2-1.2 cm wide; leaf sheaths tubular, obliquely truncate opposite leaf axil, green or striped claret, exposed part 0.7-1.7 cm long. Inflorescence terminal, usually simple, occasionally branching; peduncle 1-2 cm long, covered with sheaths 0.7-1.3 cm long; rachis successively flowered, 2-8 cm long; floral bracts oblong-elliptic, subacute, 3-veined, midgreen, 2.1-3.0 mm long, 1-2 mm wide. Pedicellate ovary terete-clavate, ribbed, 5 mm long. Flowers white to yellow or green-white, lip white with purple spots, keels magenta, column buff. Dorsal sepal ovate-elliptic to elliptic, subacute to obtuse, 3-veined, carinate, 3 mm long, 1.5-2.0 mm wide. Lateral sepals obliquely ovate-triangular, subacute, carinate, 3.3-4.3 mm long, 3.5-4.0 mm wide, forming with the columnfoot a mentum 1.9-2.5 mm long. Petals oblong to oblong-oblanceolate, subacute, with a single branching vein, 2.9-3.0 mm long, 1.1-1.2 mm wide. Labellum rhombic-elliptic, apex truncate-emarginate, medially with a small apical callosity, 4.0-4.3 mm long, 2.8-3.5 mm wide, apex 2.2-2.3 mm wide; callus obliquely sloping dorsally, V-shaped, carinae low lamellate, straight to subsigmoid apically. Column arrect, 1.3 mm long; columnfoot 2.5 mm long.

Distribution: Papua New Guinea (Bougainville); Solomon Islands.

Specimens examined: Papua New Guinea – Bougainville, Lake Loloru, 1700 m, 29 August 1930, *S.F. Kajewski 2171* (BRI); 1600 m, 8 February 1967, *P.S. Lavarack & C.E. Ridsdale NGF 31402* (K); 1525 m, 25 August 1964, *L. Craven & R. Schodde 329* (K); 1220 m, 4 August 1964, *R. Schodde & L. Craven 3752* (K); 1690 m, 9 February 1967, *P.S. Lavarack & C.E. Ridsdale NGF 31423* (BRI, K).

Solomon Islands – New Georgia, Barora logging area, 850 m, 1 August 1986, *S. Wickison 46A & B* (K). Kolombangara, above Vanga Mission, 1300 m, 1985, *G. Chaplin 837* (K); from Vanga to Summit, 1500 m, 3 November 1984, *P. Cribb & J. Campbell 5125* (K); river valley, 760 m, 4 September 1965, *Iromea RSS 2540* (K). Guadalcanal, Mt. Gallego, 800-900 m, 21 October 1984, *P. Cribb et al. 5017* (K).

Habitat: Stunted to normal cloud forest with *Pandanus*, *Pandanus* moss forest and mossy montane forest, 760-1700 m.

Etymology: From the classical Greek *mimikos*, to imitate or mimic, in reference to the similarity to *A. togarupia*.

Notes: This species bears a close resemblance to smaller plants of *A. togarupia* but it can be distinguished by the leaves which are more narrowed toward the apex, also the flowers have an obtuse to subacute (not minutely truncate with a fleshy mucro) dorsal sepal and the labellum has a lower V-shaped (not hippocrepiform) callus with the apices of the keels straight to subsigmoid (not abruptly incurved).

The name *A. pendula* Blume was misapplied to this species but that taxon differs in having a much larger basally rounded labellum callus. As noted under *A. togarupia*, Fijian plants called *A. pendula* by Kores (1989, 1991) refer to the non-peloric (or normal) form of *A. bracteosa* Rchb.f.

Appendicula polyphylla Schltr., Rep. Sp. Nov. Regni Veg., Beih. 1:345, 1912.
TYPE: Papua New Guinea – Finisterre Range, 1000 m, January 1909, *R. Schlechter 19177* (Holotype: B, destroyed).

Distribution: Papua New Guinea; Solomon Islands.

Specimens examined: Papua New Guinea – Central Prov., Lala River, 1675 m, 25 December 1935, *C.E. Carr 10498* (K). Eastern Highlands Prov., near Nondugl, 6 April 1953, *J.S. Womersley NGF 4874* (K).
Solomon Islands – Guadalcanal, Mt. Popamanatseu, 2135 m, 29 October 1965, *P.F. Hunt RSS 2970* (K).

Notes: The specimen that represents this new record for the Solomons was listed under *A. lutea* Schltr. by Lewis & Cribb (1991) but it differs from the latter in its shorter (10 vs. 15-25 mm) inflorescence, rhombic-elliptic (vs. elliptic) labellum and shorter (1.5 vs. 2.0 mm) mentum. Schlechter (1912, 1928) described and illustrated *A. polyphylla* as having a median keel on the blade of the lip, a feature absent in the three collections cited above which otherwise wholly agree with the protologue. In my opinion the median keel originally noted by Schlechter is an anomaly and not normally present on the lip.

Appendicula togarupia Ormerod, *sp. nov.*
TYPE: Solomon Islands – Rendova, track from Ughele Village to Rendova Peak, 750 m, 12 September 1991, *B.A. Lewis 24* (Holotype: K!).
Synonyms: *Appendicula bracteosa* auct. non Rchb.f.: Lewis & Cribb, Orch. Solomon Isl. & Boug.:131, 1991.
Appendicula lutea auct. non Schltr.: Lewis & Cribb, Orch. Solomon Isl. & Boug.:132, 1991, *p.p.maj.*
Appendicula polystachya auct. non (Schltr.) Schltr.: Lewis & Cribb, Orch. Solomon Isl. & Boug.:133, 1991, *p.p.*
Affinis A. calcicola Schltr. *sed carinis labello humililamellatis (non altolamellatis) et apicibus incurvatis (non recta) differt.*

Epiphytic herb. Rhizome short. Roots terete, to 1 mm thick. Stems caespitose, erect, leafy throughout but as stems age the lower leaves dehisce, usually simple, occasionally branching, 15-70 cm long, 0.01-0.55 cm thick. Leaves oblong to oblong-lanceolate, apex rounded to inequally obtusely to subacutely bilobed, midvein ending in a fine mucro at apex, thin to thinly coriaceous, light to medium green, sometimes red underneath, 2.2-7.0 cm long, 0.55-1.60 cm wide; leaf sheaths tubular, obliquely truncate opposite leaf axil, exposed part 0.6-2.0 cm long. Inflorescence usually terminal, occasionally axillary from upper part of stem, usually simple, occasionally branching; peduncle 0.9-3.0 cm long, covered with 3-5 ca. 0.6 cm long sheaths; rachis successively flowered, on average 6-7 cm long but up to 29.5 cm long; floral bracts oblong-elliptic, acute, reflexed, light green, 4-6 mm long, 1.8-2.0 mm wide. Pedicellate ovary subterete, ribbed, yellow with fine maroon stripes, 4.8 mm long. Flowers white, pale green, pale yellow to yellow, petals white with broad magenta to purple margins, lip white to yellow with red to purple at the base or with two pale purple spots, column dull orange to purple, sometimes with four purple marks underneath, anther cap yellow. Dorsal sepal ovate-oblong, apex truncate-emarginate with an obtuse fleshy mucro, weakly carinate, 3-veined, 3.0-3.8 mm long, 1.2-1.9 mm wide. Lateral sepals obliquely ovate-triangular, obtuse, midvein carinate, 3.0-3.8 mm long along midvein, 4 mm wide, forming with the columnfoot a mentum ca. 2.7-2.8 mm long. Petals obliquely oblong, obtuse, with a single branching vein, 2.2-3.2 mm long, 1.3 mm wide. Labellum rhombic-elliptic, apex emarginate, with a medial obtuse lobule, 3.5-4.8 mm long, 2.0-2.9 mm wide, apex 2.0-2.2 mm wide; callus hippocrepiform basally, its two keels curving outward and the suddenly bent inward apically with the tips almost meeting ca. 1.2-1.3 mm from the lip apex. Column arrect, 1.5-1.7 mm long; columnfoot 2.7-2.8 mm long.

Distribution: Papua New Guinea (Bougainville); Solomon Islands.

Specimens examined: Papua New Guinea – Bougainville, Iru, mountainous area, 28 September 1931, *J.H.L. Waterhouse 562* (K); Kapikavi, 1005 m, 12 February 1967, *C.E. Ridsdale & P.S. Lavarack NGF 31586* (K); Pavairi, 550 m, 25 January 1967, *P.S. Lavarack & C.E. Ridsdale NGF 31204* (K); same data, 26 January 1967, *P.S. Lavarack & C.E. Ridsdale NGF 31264* (K); Silibai River gorge, near Koniguru no.1, 245 m, 22 July 1964, *L. Craven & R. Schodde 55* (BRI, K).

Solomon Islands – Shortland Islands, *H.B. Guppy s.n.* (K). Kolombangara, upper camp site, 760 m, 2 September 1965, *P.F. Hunt RSS 2498* (BSIP, K). New Georgia, Lilosana camp, Mase Crater, *M. Dickson 8* (K); Mase River, 2 May 1986, *A. Tele* for *M. Dickson s.n.* (K). Rendova, Ughele Village to Rendova Peak track, 1000 m, 10 September 1991, *B.A. Lewis 15* (K); Rendova Peak, June/July 1999, *sine coll. s.n.* (BRI). Guadalcanal, Charivesma drainage system, 600 m, 27 March 1987, *S. Wickison & C. Morrow 89* (K); Mt. Chaunopaho, 1200 m, 26 October 1984, *P. Cribb et al. 5071* (K). Makira (San Cristobal), *sine loc.*, 45 m, 28 July 1965, *P.F. Hunt RSS 2260* (BSIP, K); Pegato River, 60 m, 23 July 1965, *P.F. Hunt RSS 2214* (K). Without locality, *S. Wickison 224* (K).

Habitat: Rainforest, often on riverside trees, 45-1200 m.

Etymology: From Togarupia, a vernacular name recorded by J.H.L. Waterhouse on Bougainville.

Notes: This species appears similar to the Papua New Guinean *A. calcicola* Schltr. [Isotype: *Schlechter 17977* (K!)] but the latter differs in its high-raised acute basal callus which continues onto the labellum blade as two tall lamellate apically straight keels. In *A. togarupia* the basal callus of the labellum is much lower, rounded basally, and its keels are relatively lower with the ends abruptly incurved.

Another similar species is the Papua New Guinean *A. lutea* Schltr. but that is a more delicate plant with generally shorter (15-25 vs. 22-70 mm) leaves, and flowers in which the labellum keels do not extend past the middle of the blade.

The name *A. bracteosa* Rchb.f. has also been applied to *A. togarupia*. The former is distributed in Fiji, Samoa and Vanuatu. In Samoa it is only known from its peloric form (lip simple, mentum lacking) which has been found once in Fiji. The normal (or non-peloric) form is common in Fiji and also occurs in Vanuatu. Kores (1989, 1991) misidentified the normal form as *A. pendula* Blume. Normal *A. bracteosa* has a characteristic labellum that is cuneate and terminates in a broad triangular acute lobe.

Confusion with *A. polystachya* (Schltr.) Schltr. seems to have occurred mainly because *A. togarupia* sometimes has branched inflorescences. However *A. polystachya* can be easily recognised by its much longer inflorescence peduncle, lanceolate floral bracts and cuneate labellum.

Acknowledgements.

I wish to thank herbarium and library staff at BRI, BSIP, HUH (A, AMES, GH) and K for their hospitality during my visits.

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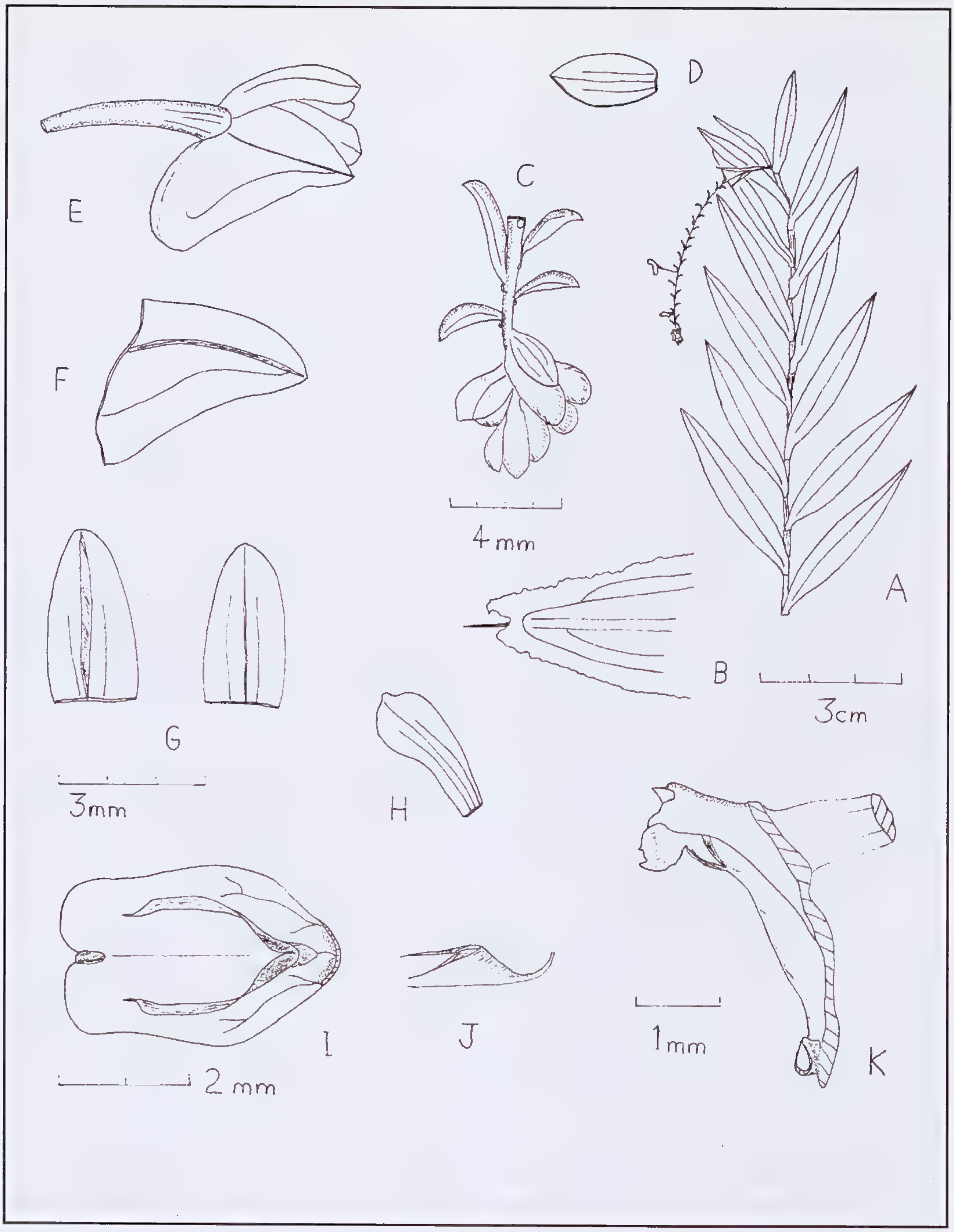
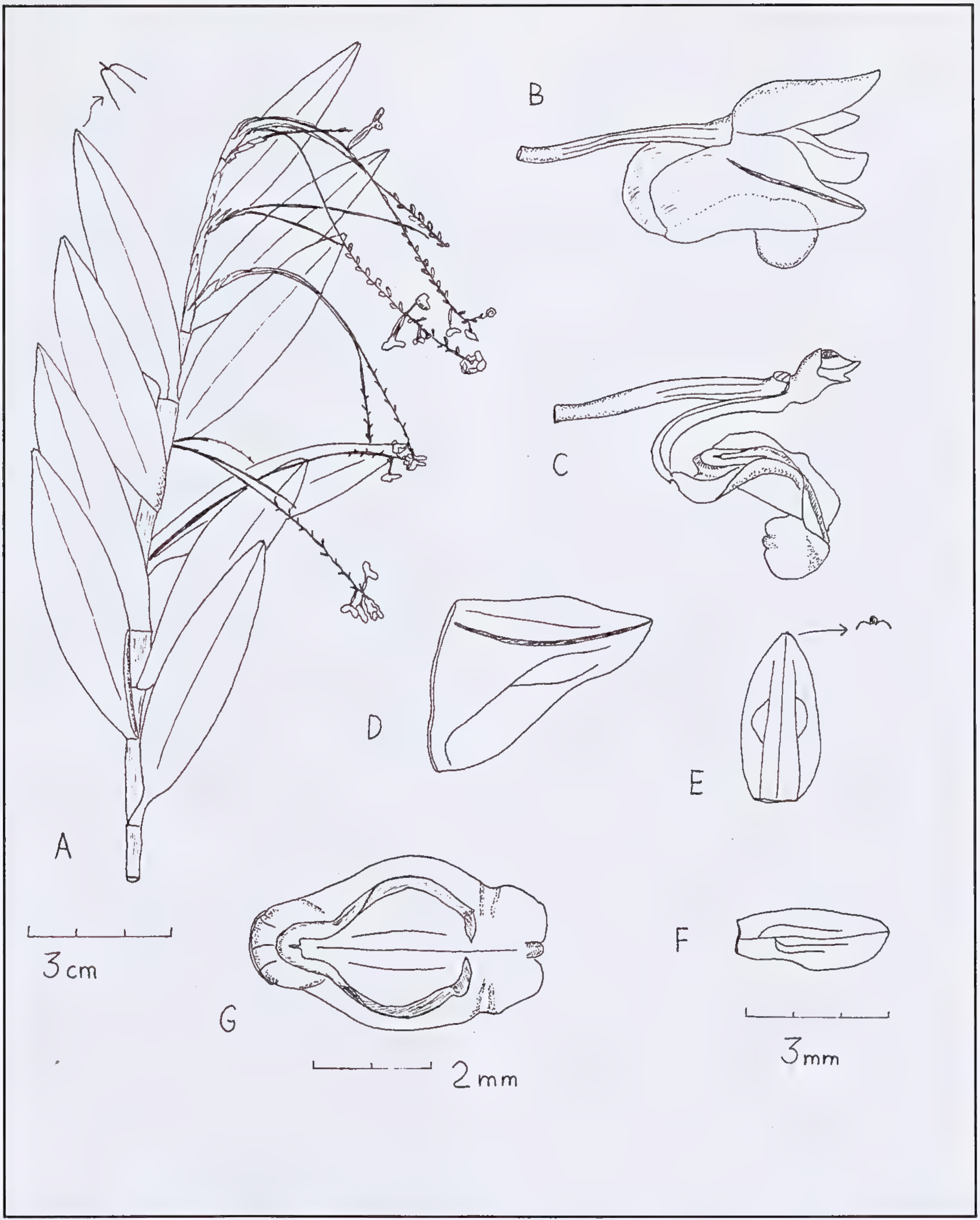


Appendicula mimica - A. upper part of stem; B. leaf tip; C. inflorescense tip; D. floral bract; E. flower; F. lateral sepal; G. dorsal sepals; H. petal; J. basal labellum callus in profile; K. column (minus anther cap) and foot. A,B,C,D-H, IJ and K to respective scales. A drawn from isotype, BC from *Schodde & Craven 3752*, rest from holotype.



Appendicula togarupia - A. upper part of stem; B. flower; C. flower minus tepals; D. lateral sepal; E. dorsal sepal; F. petal; G. labellum. A,B-F and G to respective scales. Drawn from holotype.

Five threatened new species of *Hymenochilus* (Orchidaceae) from southern Australia.

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Abstract

Hymenochilus agrestis, H. confertus, H.incognitus, H. sinuatus and *H. spissus*, all highly specialised and threatened species from southern Australia, are described as new.

Key Words

Orchidaceae, *Hymenochilus agrestis*, *Hymenochilus confertus*, *Hymenochilus incognitus, Hymenochilus sinuatus, Hymenochilus spissus,* new species, Victoria, Western Australia, Australian flora.

Introduction

Hymenochilus is a segregate genus from *Pterostylis* (Jones & Clements 2002) that is characterised by the following:- basal, sessile/subsessile, scape-encircling rosette leaves; multiflowered raceme of small greenish flowers with a short galea; weakly fused, deflexed, thin-textured lateral sepals, cupped towards the base and with short blunt apices; unlobed, thin-textured labellum with an emarginate apex; vestigial callus; and, labellum appendage more or less at right angles to the lamina, the apical part with thickened margins and a central ridge which can extend as a beak. A review of the genus is in preparation and five threatened new species are described here to bring attention to their plight.

Materials and Methods

Descriptions of taxa were made from fresh specimens. Dried specimens of *Hymenochilus* were examined from the following herbaria; AD, BRI, CANB, CBG, HO, MEL and NSW. Unless otherwise indicated, all types of *Hymenochilus* relevant to this study (or photographs thereof), and collections cited, have been seen by me.

Taxonomy

1. *Hymenochilus agrestis* D.L.Jones, sp. nov.; affinis *H. bicoli* (M.A.Clem. & D.L.Jones) D.L.Jones & M.A.Clem., sed foliis paucioribus et minoribus; scapo breviore; floribus minoribus confertis; labello minore elliptico, basali appendice tumidiore, differt. Quoque, *H. clivicolae* D.L.Jones, sed floribus minor confertis et parum amplis; labello basali appendice gracillima, differt.

Type: Victoria. Sutton Grange [precise locality withheld], 18 Oct. 2005, *J.Thomas (ORG 5024)* (holo CANB 672876).

Description: *Leaves* 5-8; *lamina* ovate to elliptic, 6-20 mm long, 3-8 mm wide, green, dull; margins entire; apex acute to apiculate. *Scape* 5-12 cm tall, 1-3 mm across, 3-14-flowered. *Sterile bracts* 4-6, closely sheathing to spreading, ovate to elliptic, 5-15 mm long, 3-6 mm wide, thin-textured, acuminate. *Fertile bracts* similar, closely sheathing. *Pedicels* 1-4 mm long, straight, slender. *Ovaries* oblong-elliptic, 3-4 mm long, c. 1.5 mm wide. *Flowers* porrect, crowded, 8-10 mm long, c. 3-3.5 mm wide, translucent green with faint darker green stripes. *Dorsal sepal* 8-9 mm long, 3-4 mm wide, porrect from the ovary at the base, shallowly curved for most of its length, abruptly decurved near the apex. *Lateral sepals* obliquely deflexed to deflexed, deeply saccate, dorsally curved, when flattened 5-6 mm long, 6-7 mm wide; points subacute, 4-5 mm apart. *Petals* asymmetrical, more or less ovate, 6-7 mm long, c. 3-4 mm wide, the anterior margin prominently flared towards the base; dorsal margin strongly thickened, dark green, a prominent dorsal gibbosity above the middle; lamina translucent green with darker veins. *Labellum* irritable, on a ligulate claw c. 1 mm long, c. 0.8 mm wide, green with a dark greenish black appendage. *Labellum lamina* oblong, c. 2-2.2 mm long, c. 2 mm wide, membranous; apex tapered, emarginate. *Basal appendage* recurved at right angles or more, dark greenish black, broadly oblong, c. 2 mm long, c. 1.3 mm wide, the apex slightly swollen and recurved; central ridge thick, just raised above the margins. *Callus* a thickened, tapered, channelled medial ridge. *Column* obliquely erect, 6-7 mm long, shallowly curved, green with darker areas on the wings. *Column wings* more or less rectangular, c. 2.3 mm long, c. 1 mm wide; basal lobe ovate-deltate; inner margins incurved, sparsely ciliate; barrier cilia c. 0.2 mm long, linear-clavate. *Anther* c. 1 mm long, obtuse. *Pollinia* clavate, c. 1 mm long, yellow, mealy. *Stigma* central, elliptical, c. 2.8 mm long, c. 1.5 mm wide, raised. *Capsules* 4-6 mm long, 2.5-3 mm wide, on pedicels to 8 mm long. **Fig. 1.**

Distribution and ecology: Restricted to western Victoria, especially in the vicinity of Sutton Grange, Taradale and Maldon. Possibly also occurring in the vicinity of Woorndoo (see Notes and drawing). At the Sutton Grange sites it grows in grassland and grassy woodland over decomposed granite. The groundcover is dominated by *Themeda triandra*. The soil is a well drained gravelly loam. Most of these sites are on agricultural land that is subject to grazing by stock. Alt. 200-350 m. Flowering period: September and October.

Recognition: Characterised by small rosette leaves (to 20 x 8 mm); short, sturdy scape (to c. 12 cm); crowded flowers (to 10 x 3.5 mm); deeply saccate lateral sepals; ovate petals; and, a small oblong labellum with a recurved dark greenish black appendage which has a thin, slightly recurved apex, the central ridge ending in a short, thickened central area that hardly protrudes above the thickened margins.

Similar species: Part of the *bicolor* group but differing from *H. bicolor* by its fewer and smaller rosette leaves, shorter scape, smaller crowded flowers and smaller elliptical labellum with a thicker basal appendage. It is also allied to *H. clivicola* which shares the abbreviated scape and crowded flowers. *Hymenochilus agrestis* can be distinguished from this species by its flowers being slightly larger and less crowded and the labellum appendage with a thinner, slightly swollen, slightly recurved apex with a short thickened central area that hardly protrudes above the margins. The low to mid-altitude occurrence is also noteworthy when compared with the higher altitude that *H. clivicola* prefers.

Notes: A small population from near Woorndoo in south-western Victoria that is possibly this species needs further study, but I have only seen a single specimen cultivated by Malcolm Thomas (illustrated by Fig. 1). Examination of photos (page 143, Jeanes & Backhouse 2006) and the line drawing show that this population is generally similar to *H. agrestis* but may have a thicker labellum appendage with a broader well-developed central ridge that protrudes above the marginal ridges. For this reason the drawing is labelled as *H. ? agrestis*. This orchid is apparently extremely rare and has not been seen in recent years (Everett Foster pers. comm.). It was known from basalt outcrops in remnant native grassland developed on red-brown clay loam.

Hymenochilus agrestis has been known as *Pterostylis* aff. *bicolor* (Sutton Grange).

Conservation status: Known from 6 sites in the vicinity of Sutton Grange with an estimated population of about 3200 flowering plants. However all the sites are on private land that is actively farmed, except for about 40 plants on a roadside reserve. One site, that has limited and controlled grazing, is being aggressively colonized by *Acacia dealbata*, which will result in changes to the ecology that will probably impact on the orchid (J.Thomas pers. comm.). Also known from near Bacchus Marsh, Maldon and Taradale (pers. comm. Jeff Jeanes). I consider that there is a good probability that the numbers of this species will decrease at some sites in the near future and suggest a conservation status of 2V by the criteria of Briggs & Leigh (1996).

Etymology: The Latin *agrestis*, pertaining to fields or cultivated land.

2. ***Hymenochilus confertus*** D.L.Jones, ***sp. nov.***; affinis *H. mutico* (R.Br.) D.L.Jones & M.A.Clem., sed habitu breviore; foliis rosulae minoribus; scapo tumidiore; floribus confertis; labello basali appendice angustiore columbine parva tumida, differt.

Type: Victoria. Woorndoo-Dundonnell Road [precise locality withheld], 11 Oct. 1997, *D.L.Jones 15591 & E.Foster* (holo CANB; iso AD, BRI, MEL, NSW).

Illustrations: Plate 190, Bishop (1996), as *Pterostylis* sp. aff. *mutica* (Basalt Plains); top plates, page 114, Jeanes & Backhouse (2000), and page 144, Jeanes & Backhouse 2006, both as *Pterostylis* sp. aff. *mutica*.

Description: *Leaves* 5-10; lamina ovate to narrowly elliptic, 5-25 mm long, 3-8 mm wide, smooth, dark green, shiny; margins entire; apex apiculate. *Scape* 7-16 cm tall, 3-4.5 mm across, 5-16-flowered. *Sterile bracts* 3-5, loosely sheathing, ovate-lanceolate, 8-22 mm long, 5-8 mm wide, acute to acuminate. *Fertile bracts* similar, closely sheathing. *Pedicels* 2-4 mm long, straight, slender. *Ovaries* linear-oblong, 3-4 mm long, c. 2 mm wide. *Flowers* porrect, densely crowded, 10-13 mm long, c. 5 mm wide, pale green with darker green veins, shiny. *Dorsal sepal* 8-10 mm long, c. 4 mm wide, not gibbous at the base, shallowly curved for most of its length then abruptly decurved near the apex. *Lateral sepals* deeply pouched, dorsally gibbous, when flattened 6-7 mm long, 6-7 mm wide, the points very shortly apiculate, c. 4-5 mm apart. *Petals* asymmetrical, more or less elliptical, 7-8.5 mm long, c. 4 mm wide; dorsal margin strongly thickened, dark green, with a prominent dorsal gibbosity more than halfway along; lamina light translucent green with 3 darker veins; ventral margin with an irregular band of beaded siliceous cells. *Labellum* irritable, on a ligulate claw c. 1.6 mm long, c. 1.3 mm wide, pale green with a dark green appendage. *Labellum lamina* oblong-obovate, 2.5-3 mm long, c. 2.5 mm wide, membranous; apex obtuse to nearly truncate, emarginate. *Basal appendage* recurved at right angles, oblong, c. 2 mm long, c. 1 mm wide; margins dark green, thickened; central ridge thick, dark green, shortly raised above the margins; apex further recurved. *Callus* a thickened, darker green medial ridge. *Column* obliquely erect, 7-8 mm long, shallowly curved, green with darker areas on the wings. *Column wings* more or less rectangular, c. 3 mm long, c. 1 mm wide; basal lobe deltate, projecting; inner margins sparsely ciliate; barrier cilia c. 0.3 mm long, clavate. *Anther* c. 0.8 mm long, obtuse. *Pollinia* clavate, c. 1 mm long, yellow, mealy. *Stigma* central, narrowly elliptical, c. 3.5 mm long, c. 1.2 mm wide, raised. *Capsules* obovoid, 5-7 mm long, 3-4 mm wide, on pedicels to 14 mm long. **Fig. 2.**

Distribution and ecology: Distributed on the basalt plain to the west of Melbourne but now extinct in most sites and currently restricted to a small area of roadside reserve in the vicinity of Dundonnell in western Victoria where it grows among rocks on basalt outcrops in grassland in red-brown loam. Altitude: c. 200 m. Flowering period: October and November.

Recognition: Characterised by fleshy, shiny rosette leaves to 25 x 8 mm; short, thick scape (to 16 cm x 4.5 mm); crowded, pale green, shiny flowers to 13 x 5 mm; deeply saccate lateral sepals; elliptical petals with prominent irregular beaded siliceous cells along the margins; oblong-obovate labellum to 3 x 2.5 mm; and, a narrow recurved green basal appendage with a small, thickened central ridge.

Similar species: *Hymenochilus muticus* is similar but is taller growing with larger rosette leaves, thinner scape, well-spaced larger flowers, and, an oblong-elliptical labellum with a broader recurved appendage in which the central ridge ends in a short, slightly protruding, blunt beak situated well below the top of the appendage.

Notes: This species has been known as *Pterostylis* sp. aff. *mutica* with the vernacular of 'Leprechaun Greenhood'. The leaves of this species are generally withered at flowering time.

A specimen from Nirranda, SE of Warrnambool, Victoria, is outside the range and habitat of this species but is provisionally included until better material can be obtained.A puzzling specimen collected from Monarto in South Australia has a remarkably similar growth habit and general appearance to this species, but is well out of its range and from a very different habitat. It is the only specimen I have seen and probably represents an undescribed species, but other collections are needed for confirmation. The details of this collection are:- Monarto, Sept. 1897, *O.E.Menzel* (NSW).

Conservation status: Once relatively widespread in western Victoria, but now highly restricted and surviving only in a small roadside reserve with no security of tenure; suggest Critically Endangered (IUCN 2001).

Etymology: The Latin *confertus*, crowded, in reference to the crowded flowers.

Specimens examined: VICTORIA: Rockbank, 25 Sept. 1900, *W.R.Baker* (MEL); Broadmeadows, 16 Oct. 1903, *W.R.Baker* (MEL); near Woorndoo, 4 Nov. 1992, *P.Barnett (D.L.Jones 10639)* (CANB); near Woorndoo, Jan. 1994, *P.Barnett (D.L.Jones 13922)* (CANB); [Nirranda, c. 20 mile SE of Warrnambool, 16 Oct. 1959, *A.C.Beauglehole 18653* (MEL 651965)]; Woorndoo, 26 Oct. 1993, *E.Foster (D.L.Jones 12533)* (CANB); Chatsworth Road, Dundonnell, 29 Nov. 1992, *D.L.Jones 10878, P.Barnett & G.Beilby* (CANB); Tottenham, Aug. 1924, *W.H.Nicholls* (MEL); *ibid*, Oct. 1925, *W.H.Nicholls* (NSW); *ibid*, Oct. 1929, W.H.Nicholls (MEL); *ibid*, Oct. 1930, *W.H.Nicholls* (MEL); Stony Creek, Tottenham, 29 Sept. 1931 & 19 Oct. 1931, *W.H.Nicholls* (MEL); Merri Creek, North Coburg, Sept. 1897, *H.M.R.Rupp* (NSW); Melton, Nov. 1908, *Dr Sutton* (MEL); Hawkesdale, Nov. 1900, *H.B.Williamson* (NSW).

3. *Hymenochilus incognitus* D.L.Jones, ***sp. nov.***; affinis *H. bicoli* (M.A.Clem. & D.L.Jones) D.L.Jones & M.A.Clem., sed scapo breviore, tumidissimo; floribus majoribus, stipatis; labello appendice basali majore et tumidiore, differt. Quoque affinis *H. agresti* D.L.Jones, sed scapo multo tumidiore; floribus multo majoribus; labello appendice basali multo, ajore et tumidiore, differt.

Type: Victoria. Sale, 21 Sep. 1895, Miss M. Wise (holo MEL 582148).

Description: *Leaves* 5-7; *lamina* ovate to elliptical, 8-20 mm long, 4-11 mm wide; margins entire; apex acute to apiculate. *Scape* 8-13 cm tall, 3-4 mm across, 5-12-flowered. *Sterile bracts* 3-5, closely sheathing, 7-22 mm long, acuminate. *Fertile bracts* similar, closely sheathing. *Pedicels* very short. *Ovaries* obovate, 3-4 mm long, c. 2 mm wide. *Flowers* porrect, moderately crowded, 8-10 mm long. *Dorsal sepal* 7-9 mm long, 5-6 mm wide, very slightly gibbous at the base, shallowly curved for most of its length, abruptly decurved near the apex. *Lateral sepals* deflexed, deeply pouched, about 4-5 mm long; points subacute. *Petals* asymmetrical, broadly ovate, 5.5-7 mm long, c. 3-3.5 mm wide; ventral margin smooth. *Labellum* irritable, probably pale green to whitish green with a large, thick, dark green appendage. *Labellum lamina* oblong-elliptic, 2-2.3 mm long, 2-2.2 mm wide, membranous; apex emarginate. *Basal appendage* recurved at an acute angle, oblong-tapered, c. 1.5 mm long, c. 0.8 mm wide, c. 0.5 mm thick; margins dark green, thickened; central ridge narrow, raised above the margins, dark green, ending in a narrow, blunt or pointed beak c. 1 mm long. *Callus* a thickened tapered medial ridge. *Column* obliquely erect, 6-7 mm long, shallowly curved, green with darker areas on the wings. *Column wings* more or less rectangular, c. 2.3 mm long, c. 1.3 mm wide; basal lobe deltate; inner margins strongly incurved, sparsely ciliate; barrier cilia c. 0.4 mm long, clavate. *Anther* c. 1 mm long, obtuse. *Pollinia* clavate, c. 1 mm long, yellow, mealy. *Stigma* central, elliptical, c. 2 mm long, c. 1.3 mm wide, raised. *Capsules* not seen.

Distribution and ecology: Known only from the type collection which consists of four specimens collected at Sale in eastern Victoria in 1895. Habitat details are not recorded but most species in the *bicolor* group grow in grassland and grassy forest. Flowering: September and October.

Recognition: Characterised by moderately short habit, very thick scapes, large crowded flowers and labellum with a large, thick, black apex on the basal appendage. Further material is needed to fully assess its status.

Similar species: Apparently with affinities to *H. bicolor* but readily distinguished by the short, thick scapes, larger crowded flowers and large, thick, black basal appendage on the labellum. Also allied to *H. agrestis* which also has an abbreviated scape and crowded flowers, but in this species the flowers are much smaller and even more crowded and the labellum appendage is smaller with a short but prominent protruding central ridge. The near-coastal habitat of *H. incognitus* is also noteworthy.

Notes: Although only known from a single collection I have chosen to describe it as a new species based on its distinctive appearance and some obvious distinguishing morphological features. The single collection was originally lodged in the private herbarium of George Lyall (1866-1951).

Conservation status: Known only from the type collection and possibly extinct; must also be considered to be poorly known and in need surveys to locate extant populations; suggest Critically Endangered (IUCN 2001).

Etymology: The Latin *incognitus*, unknown, unidentified, in reference to the very distinctive general appearance of the species and the fact that it has been passed of as *Hymenochilus* [*Pterostylis*] *muticus* for so long.

4. *Hymenochilus sinuatus* D.L.Jones, ***sp. nov***.; affinis *H. cycnocephalo* (Fitzg.) D.L.Jones & M.A.Clem., sed foliis herbaceis, succulentis, marginibus valde undulates/sinuatis; scapo tumidiore; floribus majoribus, constipatis; sepalis lateralibus superficiale saccatis; lamina labelli oblongo vel oblongo-ovato; appendice labelli latiore rostro terminale majore, differt.

Type: Western Australia. Port Gregory Road (precise locality withheld), 24 Aug. 1983, *S.D.Hopper 3349* (holo PERTH 291870; iso CANB).

Illustrations: Page 75, Hopper *et. al* (1990), as *Pterostylis* sp. (Northampton) [NOTE- the accompanying illustration is of a specimen from *Hopper 3349*, the type collection of the species]; page 356, Hoffman & Brown (1998); page 149, Brown *et al.* (1998), as *Pterostylis* aff. *cycnocephala*.

Description: *Leaves* 6-10; *lamina* obovate or elliptic, 8-32 mm long, 6-12 mm wide, bright green to light green, fleshy; margins strongly undulate-sinuate; apex acute. *Scape* 7-16 cm tall, 3-4 mm across, 2-20-flowered. *Sterile bracts* 4-6, loosely sheathing, elliptic to ovate-lanceolate, 8-20 mm long, 5-7 mm wide, acuminate to apiculate. *Fertile bracts* similar, closely sheathing. *Pedicels* c. 4 mm long, straight, slender. *Ovaries* linear-oblong, 4-6 mm long, c. 2 mm wide. *Flowers* porrect, densely crowded, 8.5-10 mm long, c. 4 mm wide, green with darker green veins, shiny. *Dorsal sepal* 7-9 mm long, 4-4.5 mm wide, hardly gibbous at the base, nearly straight or shallowly curved for most of its length, abruptly decurved near the apex. *Lateral sepals* obliquely deflexed, pouched, dorsally gibbous, when flattened c. 5 mm long, 7-8 mm wide; points subacute, c. 4 mm apart. *Petals* asymmetrical, more or less narrowly ovate, 6-7 mm long, c. 3-4 mm wide; dorsal margin strongly thickened, dark green, with a medial dorsal gibbosity; lamina light green with darker veins; ventral margin irregularly siliceous. *Labellum* irritable, on a ligulate claw c. 1.3 mm long, c. 1 mm wide, whitish green with a dark green appendage. *Labellum lamina* oblong to oblong-obovate, 2-2.5 mm long, c. 2 mm wide, membranous; apex emarginate. *Basal appendage* recurved at right angles, more or less oblong, c. 1-1.2 mm long, c. 1 mm wide, c. 0.8 mm thick; margins dark green, thickened; central ridge narrow, raised above the margins, dark green, ending in a beak 1.5-2 mm long. *Callus* a thickened darker green medial ridge. *Column* obliquely erect, 7-7.5 mm long, shallowly curved, green with darker areas on the wings. *Column wings* more or less rectangular, c. 2 mm long, c. 1.3 mm wide; basal lobe deltate; inner margins sparsely ciliate; barrier cilia c. 0.3 mm long, clavate. *Anther* c. 1 mm long, obtuse. *Pollinia* clavate, c. 1 mm long, yellow, mealy. *Stigma* central, scutiform, c. 2.5 mm long, c. 1 mm wide, raised. *Capsules* obovoid, 6-8 mm long, 3-4 mm wide, green to brown, on pedicels to 5 mm long. **Fig. 3.**

Distribution and ecology: Endemic to Western Australia where restricted to a few sites between Northampton and Kalbarri. Grows among sparse shrubs and sedges in swamps and seepage areas in moist to seasonally wet brown clay loam over laterite. Altitude: c. 150-250 m. Flowering period: Late July to September.

Recognition: Characterised by bright green, fleshy rosette leaves with strongly undulate/sinuate margins; thick scape; crowded flowers; shallowly pouched lateral sepals; narrowly ovate petals; oblong to oblong-obovate labellum lamina and, a broad labellum appendage with a large terminal beak-like structure.

Similar species: *Hymenochilus cycnocephalus* from south-eastern Australia is similar but has thin-textured leaves with entire margins, thinner scape, smaller flowers, deeply pouched lateral sepals, elliptic labellum lamina and narrow labellum appendage with a smaller beak.

Typification: There are 3 sheets in PERTH with the number *S.D.Hopper 3349* on the sheet label. Two of these sheets have tags attached to the specimens with the numbers *S.D.Hopper 3349A* (Perth 291889) and *S.D.Hopper 3349B* (no sheet number). There is no obvious reason why the collector has differentiated the specimens in this manner and I have examined all specimens carefully and am convinced they are all *H. sinuatus*. However to avoid confusion I have designated the sheet with S.D.Hopper 3349 on both the sheet label and the specimen tag as the holotype (this sheet is PERTH 291870), and the others as isotypes.

Notes: This species has been known by the tag name of "*Pterostylis* sp. Northampton (S.D.Hopper 3349)" with the vernacular of the 'Northampton Midget Greenhood'. It was discovered in 1978 and declared by CALM as threatened flora in 1989 (Brown *et al.* 1998).

The leaf margins of this species have been incorrectly described as crenulate (for example Hopper *et. al* 1990) when in fact they are undulate/sinuate.

Conservation status: Known from only 4 populations and not common at any site; suggest Critically Endangered (IUCN 2000) - (Hoffman & Brown 1998 list it as Endangered Flora; Brown *et al.*, (1998) list it as Critically Endangered). The populations are monitored each year for any threatening processes (feral pigs, rabbits and weeds in particular) and there is the possibility of declaring a Shire reserve to include one population (Brown *et al.* (1998).

Etymology: The Latin *sinuatus*, strongly waved, in reference to irregular leaf margins that are an excellent feature for identification.

Other specimens: Western Australia. Port Gregory, 8 Aug. 1986, *A.P.Brown 316* (CANB); Northampton, 12 Aug. 1992, *R.Heberle (ORG 1963)* (CANB); NE of Port Gregory (precise locality withheld), 24 Aug. 1983, S.D.Hopper 3345 (PERTH).

5. *Hymenochilus spissus* D.L.Jones, ***sp. nov.***; affinis *H. cycnocephalo* (Fitzg.) D.L.Jones & M.A.Clem., sed sed foliis minoribus; scapo tenuiore; floribus minoribus, confertis; sepalis lateralibus superficiale saccatis; labello minore, oblongi-quadrato, differt.

Type: Victoria. Woorndoo-Dundonnell Road (precise locality withheld), 11 Oct. 1997, *D.L.Jones 15592 & E.Foster* (holo CANB).

Illustrations: Page 145, Jeanes & Backhouse 2006, as *Pterostylis* sp. aff. *cycnocephala*.

Description: *Leaves* 5-9; *lamina* elliptical, 5-15 mm long, 3-8 mm wide, green, dull; margins entire; apex acute to apiculate. *Scape* 3-12 cm tall, 1.5-2.5 mm across, 3-12-flowered. *Sterile bracts* 4-6, closely sheathing, elliptic, 7-15 mm long, 3-5 mm wide, thin-textured, acuminate. *Fertile bracts* similar, closely sheathing. *Pedicels* 3-5 mm long, straight, slender. *Ovaries* oblong-elliptic, 3-5 mm long, c. 1.5 mm wide. *Flowers* porrect, crowded, 6-8 mm long, c. 3-3.5 mm wide, translucent yellowish green with faint darker green stripes. *Dorsal sepal* 6-8 mm long, 3-4 mm wide, very slightly gibbous at the base, shallowly curved for most of its length, abruptly decurved near the apex. *Lateral sepals* deflexed, shallowly pouched, dorsally gibbous, when flattened 3-4 mm long, 4-5 mm wide; points subacute, 2-3 mm apart. *Petals* asymmetrical, more or less ovate, 4.5-5.5 mm long, c. 3 mm wide; dorsal margin strongly thickened, dark green, a dorsal gibbosity above the middle; lamina translucent green; ventral margin smooth. *Labellum* irritable, on a ligulate claw c. 1.2 mm long, c. 1 mm wide, whitish green with a dark green appendage. *Labellum lamina* oblong-quadrate, c. 2 mm long, c. 1.6 mm wide, membranous; apex emarginate. *Basal appendage* recurved at right angles, oblong-tapered, c. 1.3 mm long, c. 1 mm wide, c. 0.3 mm thick; margins dark green, thickened; central ridge narrow, raised above the margins, dark green, ending in a narrow, pointed beak c. 1 mm long. *Callus* a thickened tapered medial ridge. *Column* obliquely erect, 5-6 mm long, shallowly curved, green with darker areas on the wings. *Column wings* more or less rectangular, c. 2 mm long, c. 1 mm wide; basal lobe deltate; inner margins strongly incurved, sparsely ciliate; barrier cilia c. 0.3 mm long, clavate. *Anther* c. 0.8 mm long, obtuse. *Pollinia* oblong-clavate, c. 0.8 mm long, yellow, mealy. *Stigma* central, narrowly elliptical, c. 2.5 mm long, c. 0.8 mm wide, raised. *Capsules* not seen. **Fig. 4.**

Distribution and ecology: Restricted to a small area of roadside reserve in the vicinity of Dundonnell in western Victoria where it grows among rocks on basalt outcrops in grassland in red-brown loam. Altitude: c. 200 m. Flowering period: October and November.

Recognition: Characterised by relatively small rosette leaves, slender scape, small, crowded, translucent green flowers, shallowly cupped lateral sepals, and, a small oblong-quadrate labellum with a relatively long narrow apical beak on the appendage.

Similar species: *Hymenochilus cycnocephalus* is similar but is taller growing with larger rosette leaves, thicker scape, less crowded, larger flowers with inconspicuous stripes, deeply pouched lateral sepals, and an elliptical labellum with a broader but shorter apical beak on the appendage.

Notes: This species has been known as *Pterostylis* sp. aff. *cycnocephala* with the vernacular of 'Cygnet Greenhood'. The leaves of this species are generally withered at flowering time.

Conservation status: Highly restricted and surviving only in a small roadside reserve with no security of tenure; suggest Critically Endangered (IUCN 2001).

Etymology: The Latin *spissus*, dense, compact, close together, in reference to the crowded flowers.

Acknowledgements

I thank Laurie Adams for the Latin diagnoses, Marion Garratt, Karina Richards, Emma Clifton and Tara Hopley for technical assistance, Barbara Jones for reading the manuscript and Jean Egan for scanning the drawings. I also thank Jeff Jeanes for discussions about the Victorian taxa, Everett Foster for cheery companionship in the field, Jenni Thomas, Geoff Nevill, Malcolm Thomas, Geoff Beilby, Everett Foster, Andrew Pritchard and the late Paul Barnett for access to fresh specimens from Victoria, Chris French and Andrew Brown for information on *H. sinuatus*, Mark Clements for discussions about *Hymenochilus*, and the directors of AD, BRI, CANB, HO, MEL, NSW for providing access to specimens.

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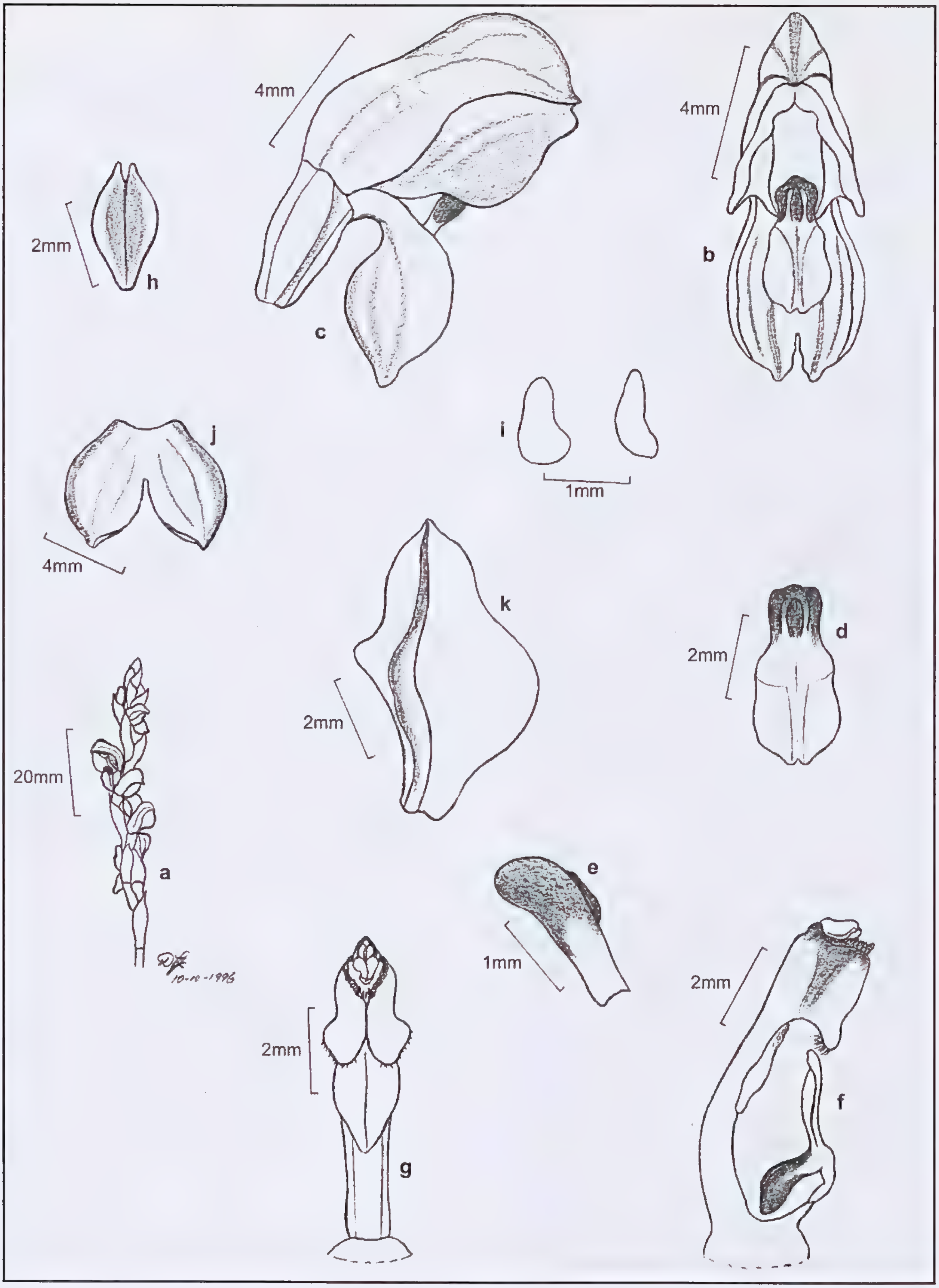

Fig. 1. *Hymenochilus ? agrestis*, cult. ex Woorndoo, Vic, M. Thomas a. part of inflorescence; b. flower from front; c. flower from side; d. labellum from above, flattened; e. labellum appendage from side; f. column and labellum from side; g. column from front; h. stigma; i. pollinia; j. lateral sepals; k. petal.

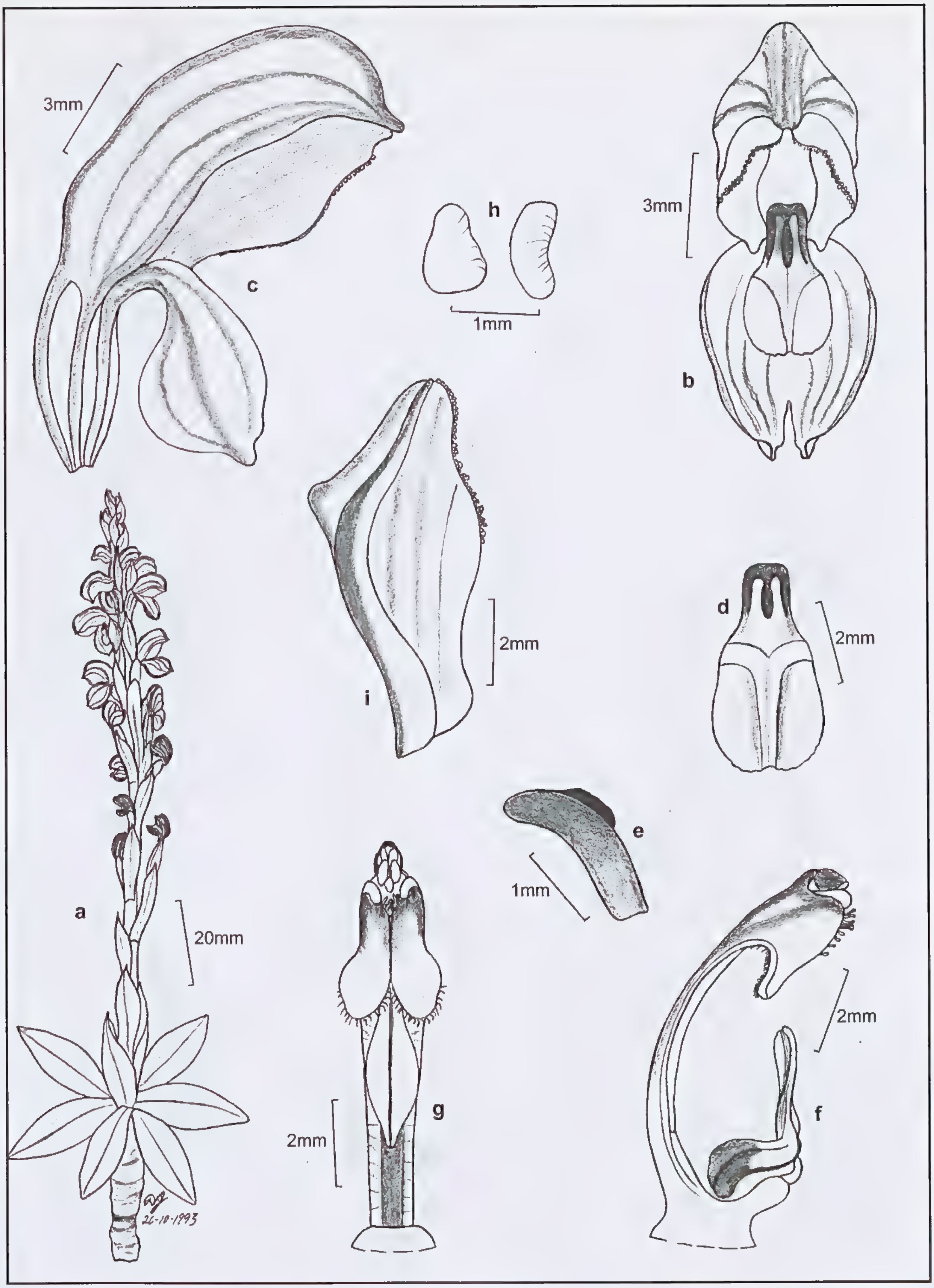

Fig. 2. *Hymenochilus confertus*, Woorndoo, Vic, E. Foster a. flowering plant; b. flower from front; c. flower from side; d. labellum from above, flattened; e. labellum appendage from side; f. column and labellum from side; g. column from front; h. pollinia, i. petal.

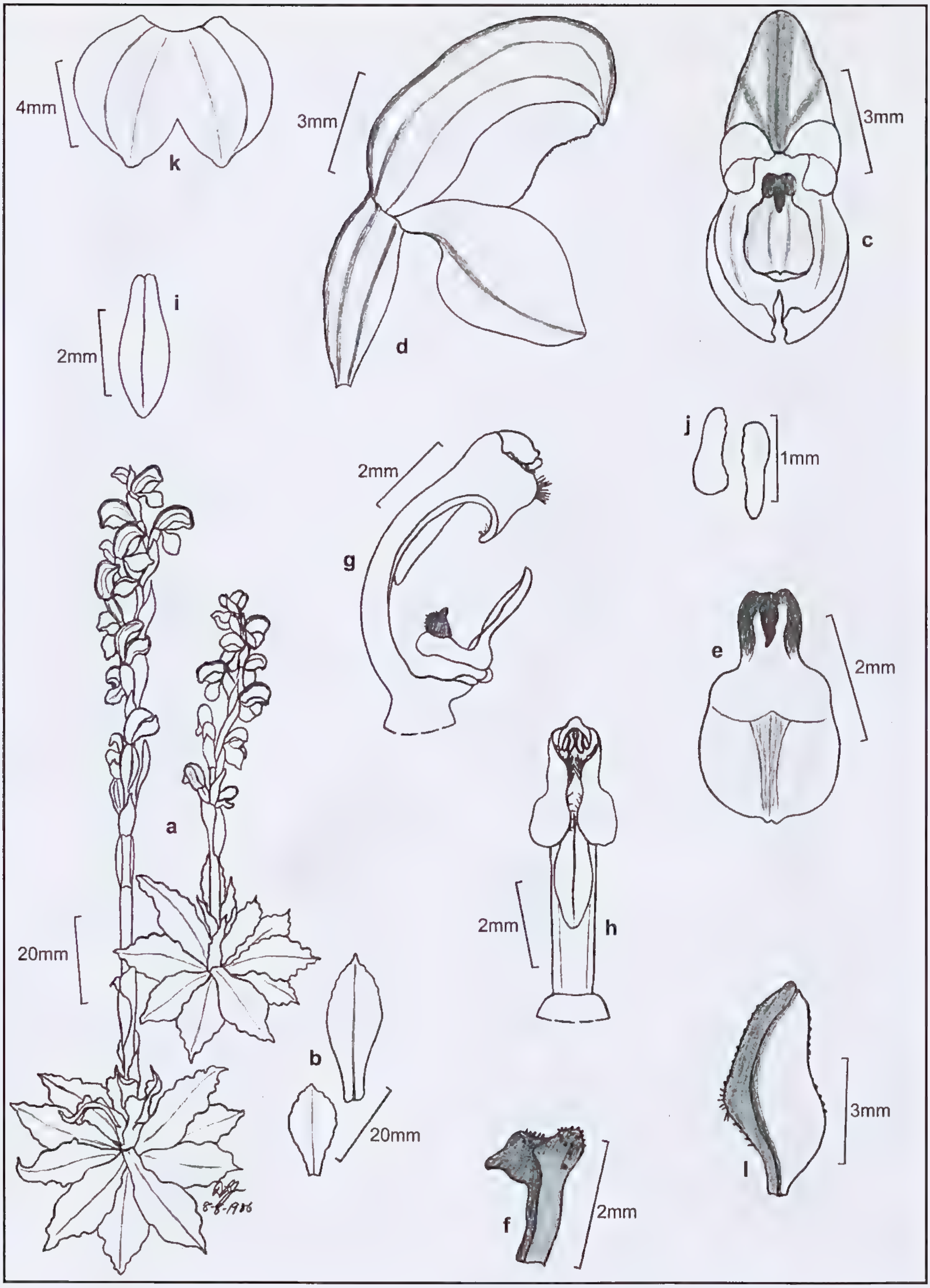

Fig. 3. ***Hymenochilus sinuatus*****, Port Gregory, A.P.Brown 316** a. flowering plants; b. leaves, flattened; c. flower from front; d. flower from side; e. labellum from above, flattened; f. labellum appendage from side; g. column and labellum from side; h. column from front; i. stigma; j. pollinia; k. lateral sepals; l. petal.

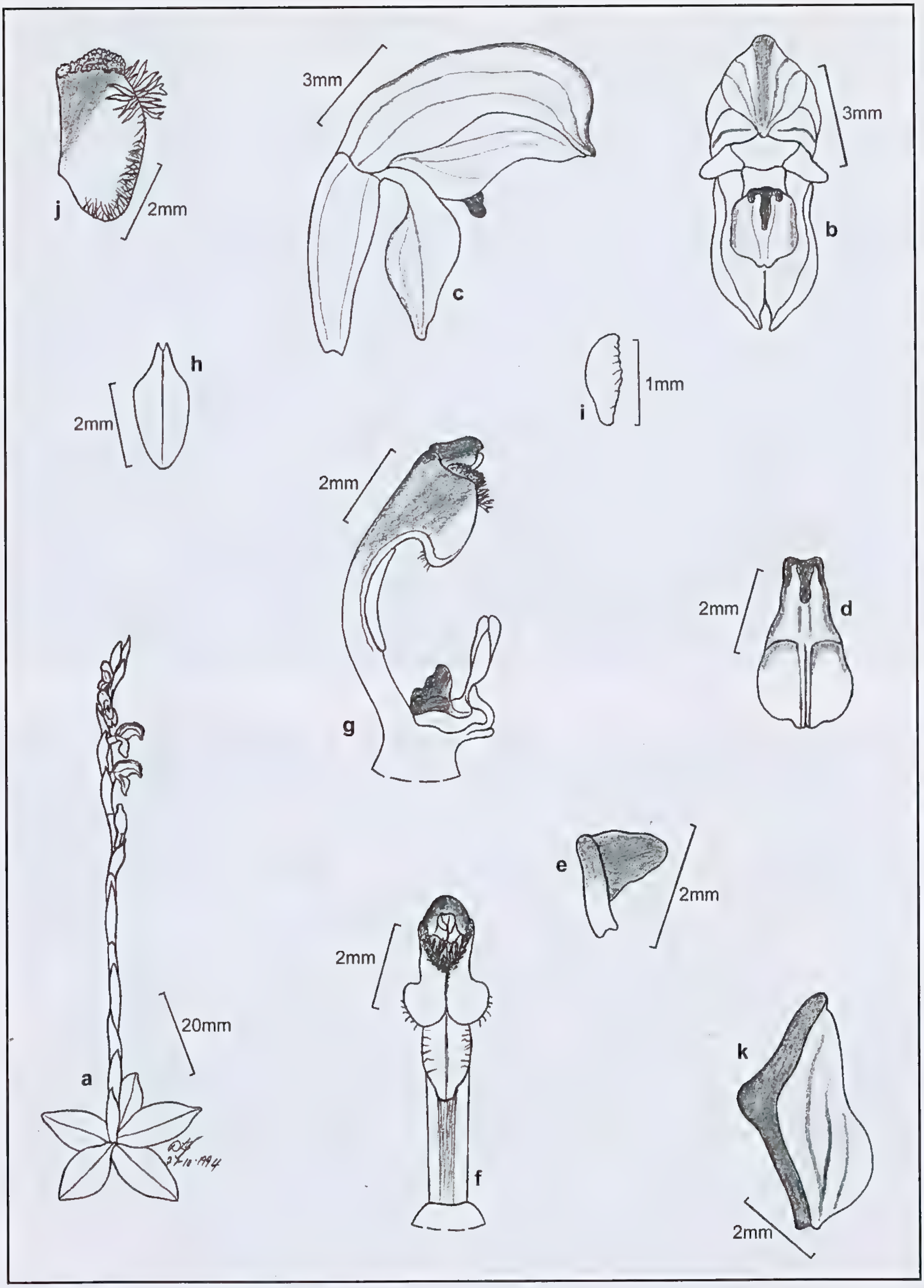

Fig. 4. *Hymenochilus spissus*, Dundonnell, Vic, E. Foster a. flowering plant; b. flower from front; c. flower from side; d. labellum from above, flattened; e. labellum appendage from side; f. column from front; g. column and labellum from side; h. stigma; i. pollinium; j. interior of column wing; k. petal.

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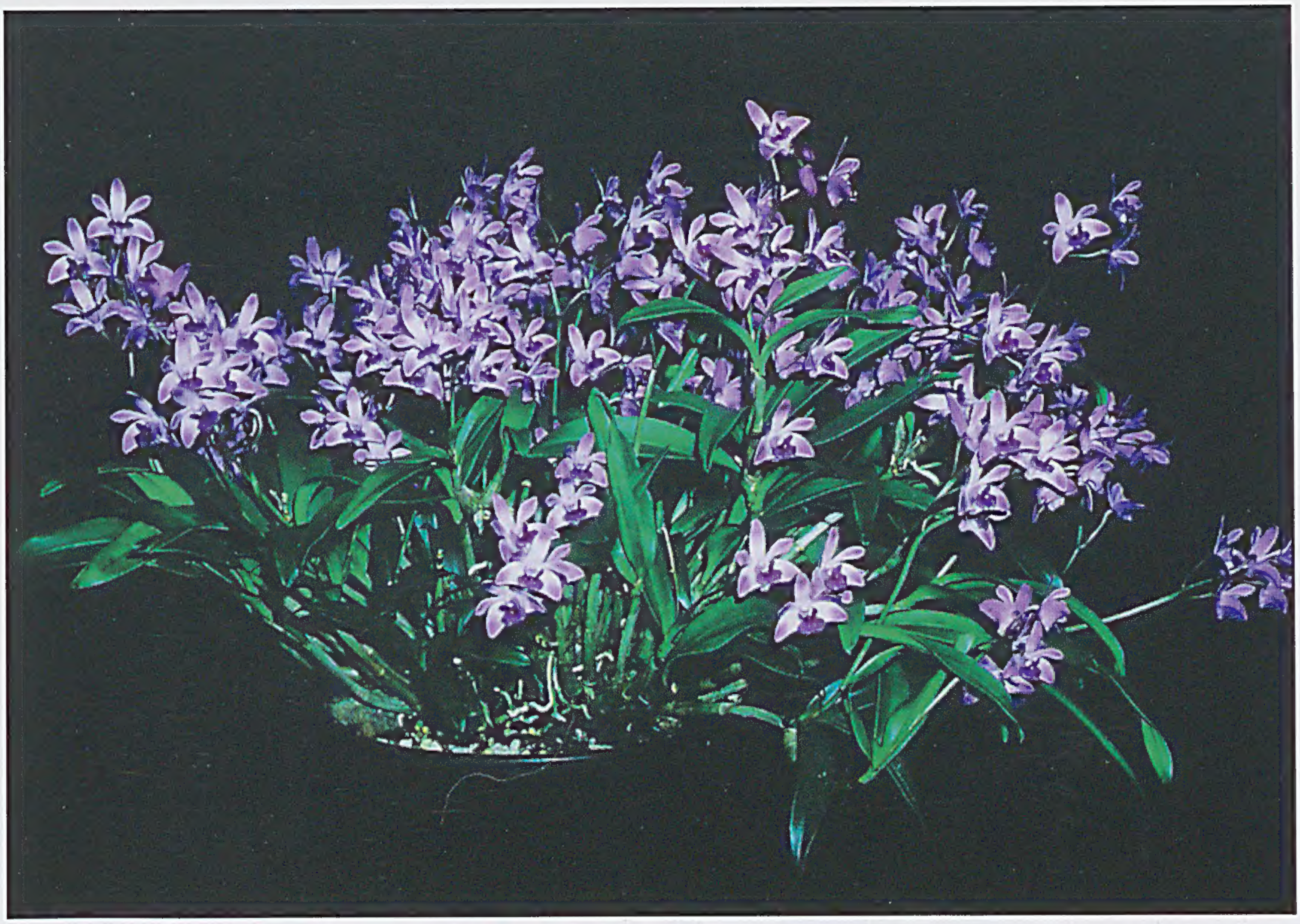

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